TECHNOLOGY DEPT

SEPTEMBER 1, 1957

Telephone Engineer AND MANAGEMENT

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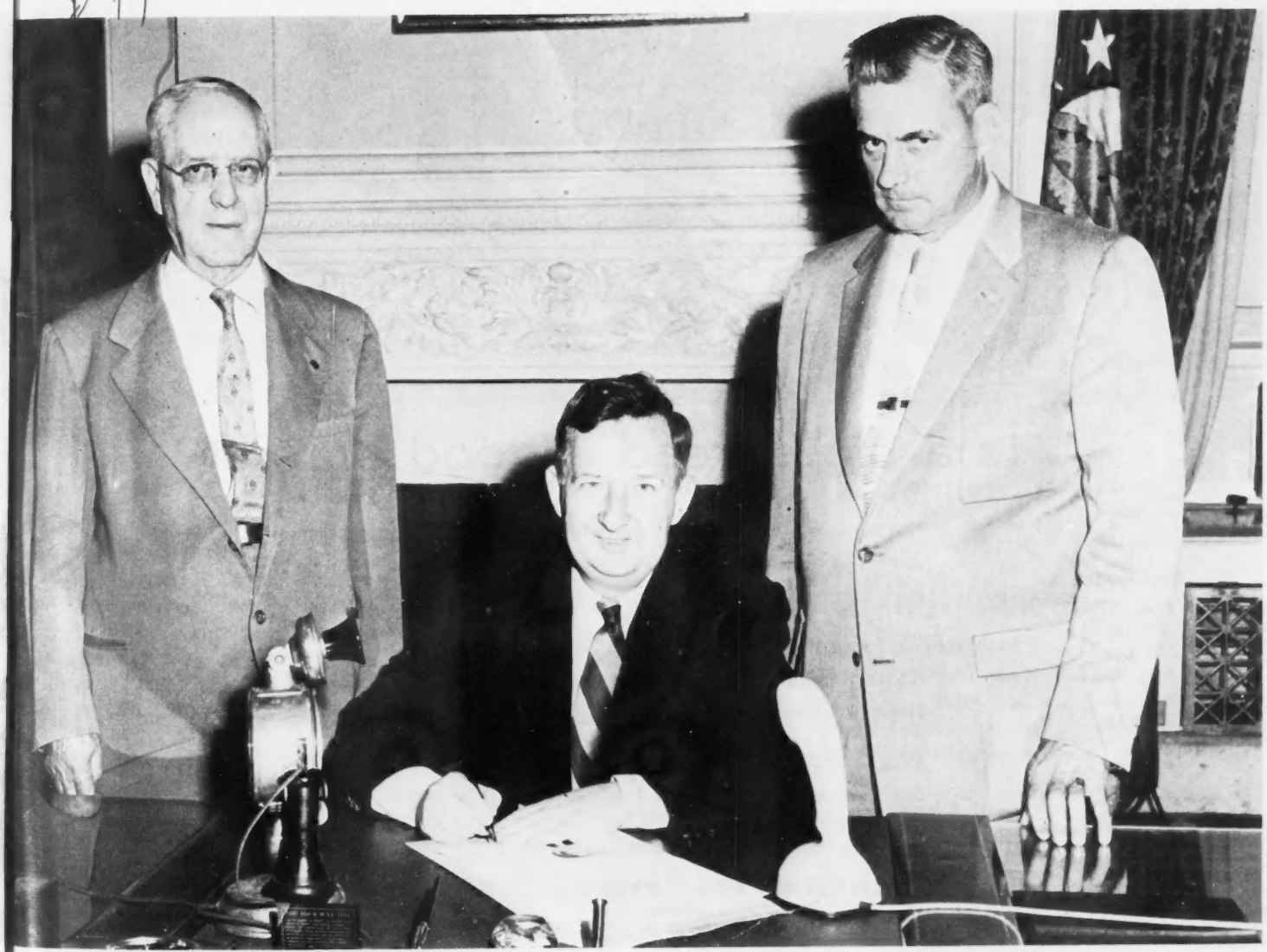
THE NATIONAL TELEPHONE MAGAZINE



INDEPENDENT TELEPHONE WEEK—SEPT. 8-14

Special Telephone Industry Report, by Leon Roberts

is a big spread a good spread?

Not for him! But definitely yes when you're talking about rising costs and profit margins. So if your directory is off the straight and narrow, blaze a trail to our Complete Directory Service Plan.

We completely handle the directories of independent telephone companies in 4400 communities today . . . and show them larger revenues than they thought possible.

Like to know how it's done? We'll be happy to show you. Just call or write our nearest office.

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• National-Standard Copperply is unique because its heavy copper jacket is bonded to a steel wire core by a continuous *electroplating* process. This results in precise concentricity and permits closely controlled coating thickness. It also permits the use of core steels in a wide range of analyses.

The coating is so uniform and the bond so permanent that Copperply can be twisted, bent, flattened, stranded, woven or even roll-threaded without the slightest danger of rupturing the coating or otherwise exposing the core. Thus Copperply's extreme uniformity and permanence mean prolonged service life and maximum protection against rust, regardless of forming or service requirements.

The uses for this unique new wire are many. They range from high strength communications line and electronic applications to wire for non-rust masonry ties and decorative jewelry chain—*wherever* the combined qualities of copper and steel can work to advantage.

Name the use you have in mind and let National-Standard help you work out details. It's part of our unusual service.

NATIONAL NS NATIONAL-STANDARD Company NILES MICHIGAN **STANDARD**

DIVISIONS: NATIONAL-STANDARD, Niles, Mich.; *tire wire, stainless, music spring and plated wires* • **WORCESTER WIRE WORKS, Worcester, Mass.;** *high and low carbon specialty wires*
WAGNER LITHO MACHINERY, Secaucus, N. J.; *metal decorating equipment* • **ATHENIA STEEL, Clifton, N. J.;** *flat, high carbon spring steels* • **REYNOLDS WIRE, Dixon, Ill.;** *industrial wire cloth*

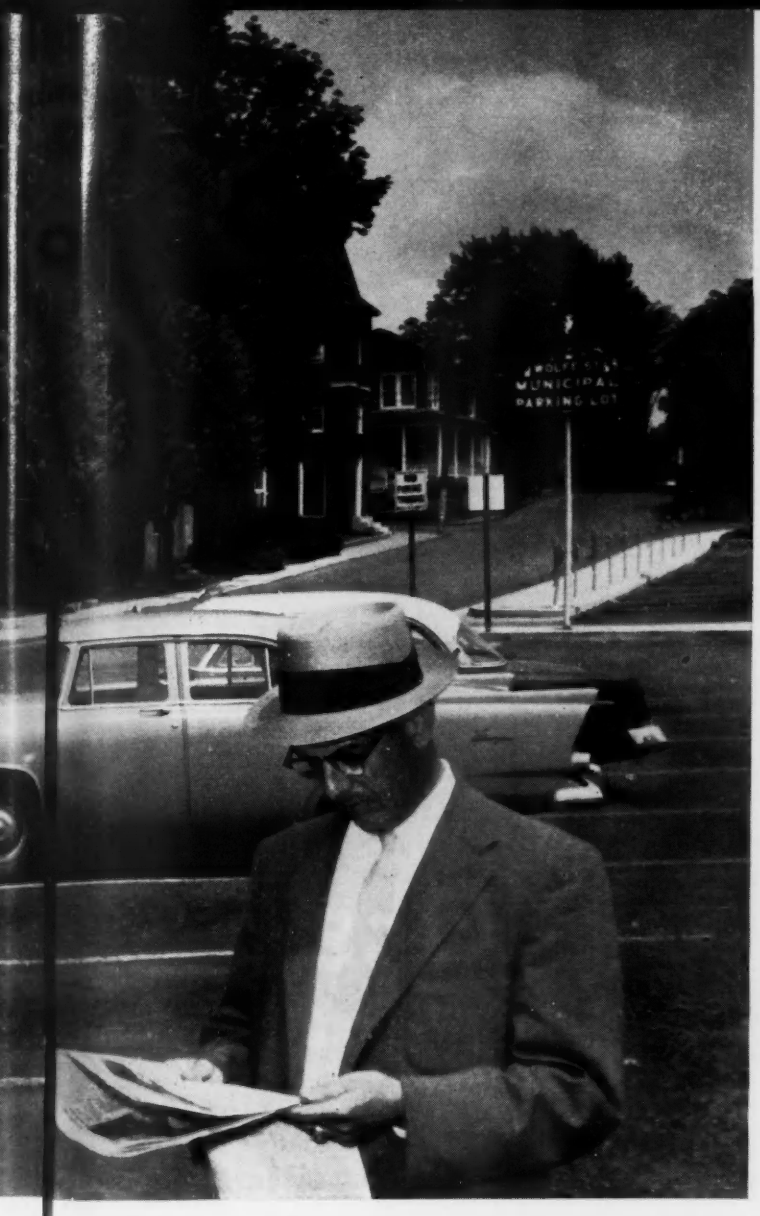
Right in the middle of the Shenandoah Valley, just 15 miles from the famous Skyline Drive through the Blue Ridge Mountains, is Harrisonburg, Va., with substantially more telephones in service per 100 people than either the state or national ratio. The town of 12,000 population is headquarters for Harrisonburg Telephone Company. Mr. Lester E. Beydler, Commercial Manager, is shown here trying out a new Alcoa® Outdoor Booth.

"NOTHING IN THE TELEPHONE BUSINESS GIVES YOU A BETTER RETURN ON YOUR MONEY."

reports Lester Beydler of Harrisonburg Telephone Company

"These Alcoa Outdoor Booths are one of the best revenue producers ever developed," says Mr. Beydler. "Here at the Harrisonburg Telephone Company, we have one Alcoa Booth in the Municipal Parking Lot that produces an average of $124.00 a month. Other booths average between $70.00 and $90.00. There are inside booths all around these locations, but the revenue from these existing booths was not decreased at all when we added the booths in several outdoor locations.

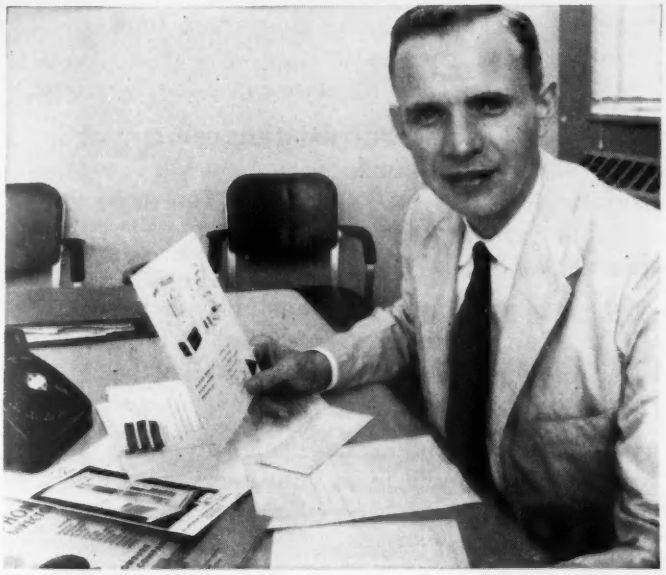
"We never have any trouble getting locations for new outdoor booths," reports Mr. Beydler. "As a matter of fact, we have more requests than we are able to take care of. The property owner furnishes the current for the booth. He's glad to do that in return for the increased business he gets."



"ONCE A WEEK, a man goes around to all the outdoor booths and wipes off the aluminum and glass with a damp cloth," says Lester Beydler. "He sweeps out any trash that may have been dropped on the floor, collects the coins, and no more attention is required for another week."

"VANDAL RESISTANCE of these booths looks good to me," says Chief of Police Julius Ritchie, of the Harrisonburg Police Department. "In these Alcoa Booths, the mounting plate for the instrument can't be removed without a complete disassembly of the booth. It's impossible for a vandal to get good leverage on the telephone with a crowbar."

GET MORE INFORMATION ON ALCOA BOOTHS. Write for free brochure. And ask your jobber to show you the Alcoa Goodwill Kit and how Alcoa Booths can increase your revenue and build customer good will. Aluminum Company of America, 1691-J Alcoa Bldg., Pittsburgh 19, Pennsylvania.



"THE FREE GOODWILL KIT we got with our latest Alcoa Booth contained newspaper ad mats, publicity releases, free envelope stuffers, radio and TV commercials. This material is just the ticket to help us do a bang-up job of advertising these booths to our customers."

WE CHOSE
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ALUMINUM
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ALUMINUM COMPANY OF AMERICA

Your Guide to the Best in Aluminum Value

THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS

BUILT TO TAKE ABUSE!

—Outdoor Monophones for Exposed Locations

Weather-proof construction—inside and out—guarantees long trouble-free service. Look at these features!

- **Rubber-covered wiring**
- **Windings impregnated with moisture-resistant compound**
- **Waterproof jacket over handset cord**
- **Cast aluminum alloy case**
- **Cam-locking door with rubber gasket**
- **Splash-proof sound vents**

The Outdoor Monophone easily mounts with four bolts or lag screws on pole or wall. Conduit openings are provided at both top and bottom of case. All connections are made through the terminal strip, and can be easily changed.

Remember—for anything in the telephone field, call Automatic first. Our complete line of products will meet your every need. For more information on the Outdoor Monophone, write for Circular 1873. Address: *Automatic Electric Sales Corporation, Northlake, Illinois.* Or, call *FIllmore* 5-7111.

AUTOMATIC ELECTRIC

A member of the General Telephone System
One of America's great communications systems

GENERAL SYSTEM

Past, Present, Future 33

As Independent Telephone Week approaches and as the United States Independent Telephone Association prepares to observe its 60th Anniversary, Leon Roberts, USITA's Director of Information, takes a look at the past, present and future of the telephone industry. And that future, as Mr. Roberts points out, is brighter now than at any other time in the industry's history.

Better Management 36

With this chapter on "Profits & Service Through Better Management," James L. Morrison concludes a series of eight articles devoted to a study of scientific management. We hope the material has contributed to a better understanding and greater appreciation of the need for steadily improving the quality of management. Let us know if you want us to reprint the eight articles.

Rural Distribution Wire 42

In Part Two of his Operating Manual on "Rural Distribution Wire," our Technical Editor, John S. Reed discusses: (1) Pole Sizes, Span Lengths and Sags; (2) Stringing Procedures; (3) and Sagging Rural Distribution Wire; (4) Attaching Support Wire to Poles or Crossarms.

New Products 71

Here is the latest information on: — (1) A new trencher which is completely mobile with three forward digging speeds and reverse; (2) a new "Spur-Stay Pad," designed to eliminate kick-back and twisting problems; (3) a new low cost, automatic aerial ladder assembly; (4) a new, miniature resistance soldering tool; (5) a new, two-legged derrick; and (6) a gaff-shaping kit.

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Telephone Engineer

AND MANAGEMENT

THE NATIONAL TELEPHONE MAGAZINE

VOL. 61 No. 17 SEPTEMBER 1, 1957

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FRONT COVER

THE WEEK beginning Sunday, September 8, has been designated as Independent Telephone Week, and will be observed nationally in recognition of the Independent Telephone industry's contributions to the telephone communications system of the U.S.A. Front cover photo shows GOVERNOR C. WILLIAM O'NEILL of Ohio signing Proclamation designating week of September 8 as Independent Telephone Week in Ohio. Governor O'Neill signs the proclamation as COLONEL GUSTAV HIRSCH, left, a pioneer in Independent telephony and president of Gustav Hirsch organization, Columbus, and JAMES I. HUNT, right, president of Ohio Independent Telephone Association and president of the Home Telephone Co., Middlefield, Ohio, look on. Governor O'Neill is flanked on his right by a "Candlestick" hand set used at the turn of the century and on his left by a new dial telephone instrument.

Volume 61, No. 17. Published on the 1st and 15th of each month by TELEPHONE ENGINEER PUBLISHING CORP. Office of Publication, Rochelle, Ill. Executive and Editorial Office, 7720 Sheridan Road, Chicago 26, Ill. Telephone — Rogers Park 4-3040. Subscriptions: U. S. and Possessions, $4.00 per year; Canada $4.50; in all other countries, $6.50. Single copies, U.S.A., 50 cents. Entered as Second Class matter at the post office at Rochelle, Ill. under the act of March 3, 1879.

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ANOTHER MAJOR IMPROVEMENT

IN GALVANIZED TELEPHONE WIRE

Crapo

HTL-195

The New LOWER RESISTANCE Extra-High Tensile Line Wire

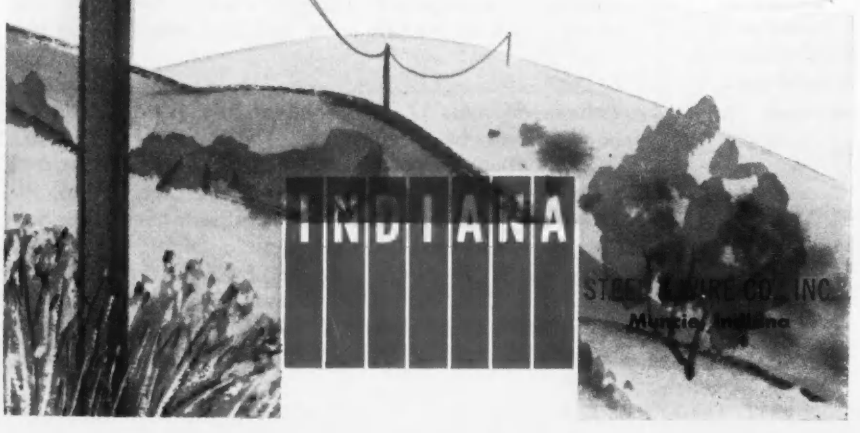
FOR EXTREME LONG-SPAN, LOW-COST RURAL LINES

A combination of telephonic transmission qualities and physical strength never before attained in a galvanized steel telephone wire now is available in **Crapo** HTL-195. This new, extra-high tensile line wire with superior electrical characteristics makes possible spans to 600 feet in Heavy, 650 feet in Medium and 700 feet in Light Loading Districts. The result: up to 40% reduction in the number of pole structures required with marked savings in materials and in construction costs.

The voice transmission effectiveness of **Crapo** HTL-195 is comparable to that of **Crapo** HTL-135 — the high tensile steel line wire which has contributed so much to the expansion and improvement of rural telephony. The telephonic transmission quality of both **Crapo** HTL-195 and **Crapo** HTL-135 is superior to that of older grades of ferrous wire.

Crapo HTL-195 can be employed to best advantage where terrain and other conditions permit the use of extremely long spans, for joint use with power circuits and for extensions to one or more subscribers in remote areas.

Investigate the practical and economical advantages of this new, revolutionary conductor — product of continuing research by Indiana Steel & Wire Company, Inc., pioneers in the development of high tensile steel telephone wire. Write for complete information, including Manual of Engineering Data, No. A-195.



COMING CONVENTIONS

TENNESSEE Telephone Association, Hermitage Hotel, Nashville, Sept. 12-13.

ARKANSAS Telephone Association, Arlington Hotel, Hot Springs, Sept. 16-17.

MICHIGAN Independent Telephone Association, Hotel Pantlind, Grand Rapids, Sept. 17-19.

ROCKY MOUNTAIN Telephone Association, Hotel Utah, Salt Lake City, Sept. 18-20.

WEST VIRGINIA Independent Telephone Assn., Blackwater Lodge, Davis, Sept. 30-Oct. 1.

NORTH CAROLINA Independent Telephone Association, Carolina Hotel, Pinehurst, Oct. 3-4.

UNITED STATES Independent Telephone Association, Conrad Hilton Hotel, Chicago, Oct. 14-16.

VIRGINIA Independent Telephone Association, Roanoke Hotel, Roanoke, Oct. 24-25.

SOUTH CAROLINA Independent Telephone Association, Clemson House, Clemson, Nov. 4-5.

ALABAMA-MISSISSIPPI Telephone Association, Thomas Jefferson Hotel, Birmingham, Nov. 11-12.

GEORGIA Telephone Association, Radium Springs Hotel, Albany, Nov. 13-14.

OKLAHOMA Telephone Association, Huckins Hotel, Oklahoma City, Nov. 21-22.

REYNOLDS ALUMINUM OUTDOOR TELEPHONE BOOTH

It goes where business is!

Pick up New, Extra Revenue. Football, like many other sports and recreational attractions, is big business. Here's only one example of the many profitable locations for lightweight, portable, easy-to-set-up and easy-to-relocate Reynolds Aluminum Outdoor Telephone Booths! Use them outside shopping centers, service stations, airports, drive-in restaurants and theaters, along the highway, at downtown corners and busy vacation spots.

Extend Service Anywhere. Reynolds Aluminum booths weigh only 325 lbs. erected . . . can be quickly assembled by unskilled labor. They're rigid and sturdy, yet simple to move where business *is*. And styled to *attract* extra-revenue paystation business! They're colorful, roomy, convenient—provide out-in-the-open accessibility day or night—"open" 24 hours a day, *every* day!

Offer "Something Extra" for Extra Profits. Bright, cheerful Reynolds outdoor booths are a credit to any location. Their friendly, inviting atmosphere, interior roominess and perfect ventilation stimulate *additional* paystation usage. Go after this "bonus revenue"—without reducing the number of calls from existing indoor locations. Write for complete specifications and revenue-producing data today. *Address: Reynolds Aluminum Fabricating Service, 2000 South Ninth Street, Louisville 1, Kentucky.*

The Finest Products Made with Aluminum are made with REYNOLDS ALUMINUM

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EVERY TOOL NEEDED
for the complete spinning job

CABLE PLACING RINGS
Designed especially for power cable.

LASHING WIRE CLAMPS
For holding lashing wire prior to terminating.

PLATFORM CLAMPS
The perfect tool for supporting splicer's platform.

HAND LINE BLOCK
For raising material to the pole or messenger.

SLACK PULLERS
Either ratchet handle or slip handle — for pulling slack in the messenger when splicing.

SPINNING WIRE
Copper, copperweld, steel, stainless steel, aluminum, for every need, furnished on returnable metal reels.

PLEASE WRITE FOR LITERATURE

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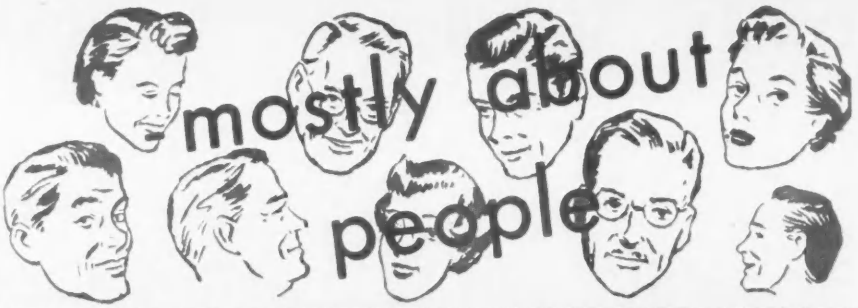

ACROSS THE EDITOR'S DESK

Important Week

INDEPENDENT Telephone Week starts September 8. In this issue you will read and see how the telephone industry is publicizing this event. Many state governors have published Proclamations and we are publishing a number of them in this issue. The success of Independent Telephone Week in your locality is in YOUR hands!

Arthur Jordan

ARTHUR B. JORDAN, 76, vice president of the Peninsular Telephone Co., Tampa, died August 2 following a traffic accident in Tampa. Mr. Jordan spent 56 years in the telephone industry, 8 years in Ohio and the balance with the Peninsular company. He was an honorary member of the Independent Pioneers.

Peninsular Tel. Co.

WHILE OUR thoughts are in Florida we take this opportunity of congratulating the management of the Peninsular Telephone Co. on the 15th Anniversary of the excellent company magazine "*Hello*." The current August issue is a far cry from Vol. 1 No. 1 as the first issue was just a mimeograph sheet. The current issue is in full color. One of our Tampa spies sent us a clipping from Tampa Tribune of August 3 showing president Carl D. Brorein presenting a cup to a winner in a Tampa U. S. Savings Bond campaign — interesting business for a gentleman that has headed almost every civic program in Florida.

R. E. Brookbank

ANOTHER well known telephone man, *R. E. Brookbank*, Pendleton, Ind., was the victim of an accident involving a fallen ladder during August. Mrs. Brookbank heard the fall and while rushing to his assistance fell and fractured her skull. She passed on a few hours later. Mr. Brookbank is at St. John's Hospital, Anderson, Ind., and we are sure messages of encouragement will be welcomed.

Rhinelander Report

THANKS TO Paul R. Parsons, sec'y-treas. and general manager of the Rhinelander (Wis.) Telephone Co., for sending us the historical booklet on the history of that company while it is commemorating it's current 100th dividend. The cover of this interesting booklet pictures dividend check replicas dated in 1912, 1934 and in 1957. The report to the stockholders by *Allen C. Brown*, president, introduces the reader to the report and historical data.

Big Issues Coming

WHILE THE industry celebrates Independent Telephone Week during this month our Editors and Staff are busily preparing three issues of this magazine that are quite Special to us, and we hope to you. Our next issue dated September 15 will be our *Fall Construction & Maintenance* Number. Immediately following, the *Pre-Convention* Number of October 1 will be published, to be followed on October 15 with the *Convention Report Number*. All three issues will be larger than usual.

USITA Convention

MAY WE suggest you make your hotel reservations NOW if you plan to attend the 60th Anniversary convention of the United States Independent Telephone Association in Chicago, October 14 thru 15 is the date — Conrad Hilton Hotel, is the place.

Who can blame "New-Business" Bill for getting excited? He's just realized the new Super Mart could be a terrific spot for a paystation! Bill knows that new locations like this pop up surprisingly often—in almost every community. He keeps his eyes open—finds a lot of good paystation sites just driving around town.

Needless to say, it's good business to check *your* locality frequently for new paystation locations. If you want to know more...how to effectively determine the best paystation sites, write for a free copy of our Survey Simplifier. Address:
Automatic Electric Sales Corporation, Northlake, Illinois.
Or call FIllmore 5-7111.

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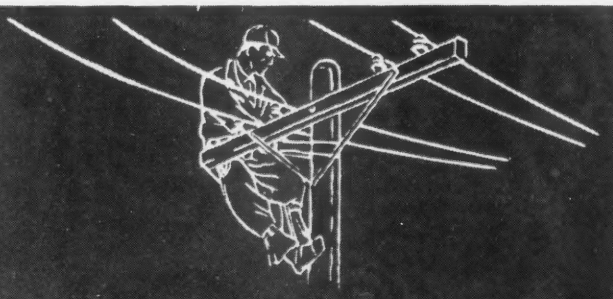
A member of the General Telephone System—
One of America's great communications systems

INDUSTRY NEWSLETTER



REA Loans

RURAL Electrification Administration has reported approval of following loans for improving and expanding rural telephone service: Cameron Tel. Co., Sulphur, La., $480,000 loan, to rebuild and repair telephone plant destroyed and damaged as a result of Hurricane Audrey. William L. Henning is pres. and mgr., of Cameron Tel. Co. . . . Ace Tel. Assoc., (successor to Fillmore County Tel. Cooperative), Houston, Minn.; $321,000, fourth loan. J. H. Lewis is pres., and Robert Bunke is mgr., of Ace Tel. Assoc. . . . Pinebluff (N. C.) Tel. Co., Pinebluff, North Carolina; $29,000, second loan, Mrs. A. G. Wallace is pres., of Pinebluff Tel. Co., and E. H. Mills is mgr. . . . Whiteford Tel. Co., Whiteford Center, Mich.; $1,060,000, first loan; to extend and improve rural telephone service in Lenawee and Monroe counties. Edward H. Daverman is pres., and Frederick W. Krumm is manager of Whiteford Tel. Co. . . . Mountain Rural Tel. Cooperative Corp., Inc., West Liberty, Ky., $309,000. W. A. Heagen is pres., of Mountain Rural Tel. Cooperative. . . . Northwest Mutual Aid Tel. Corp., Columbus, N. D. (mailing address: Ray, North Dakota); $460,000, third loan. Arthur S. Johnson is pres. of Northwest Mutual Tel. Aid Corp. . . . New State Tel. Co., Roosevelt, Okla.; $398,000, third loan, Harold Peterson is pres. of New State Telephone Co.

Farms With Telephones

PERCENT of farms with telephones is double what it was in 1940 and continues to increase in most States, but at decreasing rate except in southern and southwestern States, according to survey made as of July 1 by Crop Reporting Board, U. S. Dept. of Agriculture. Southern States lead increase since 1940 primarily because of low proportion of farms in those States having telephones. In 1940 there were only 7 states in which as many as 50% of farms had telephone service. By 1945 eight more States had reached 50% mark. 1950 Census showed 28 States having 50% or more of their farms with telephones. As of 1955 only 17 States remained under 50% with 13 States having 75% or more.

Since 1947, percentage of farms with telephone service has continued to increase in practically all States. However, in some Northeastern States there has been reduction in actual number of telephones even though percentage increased slightly because of decline in total number of farms. As of July 1, 1956, States having highest percentage of farms receiving telephone service were Connecticut, Massachusetts and New Jersey.

Financial

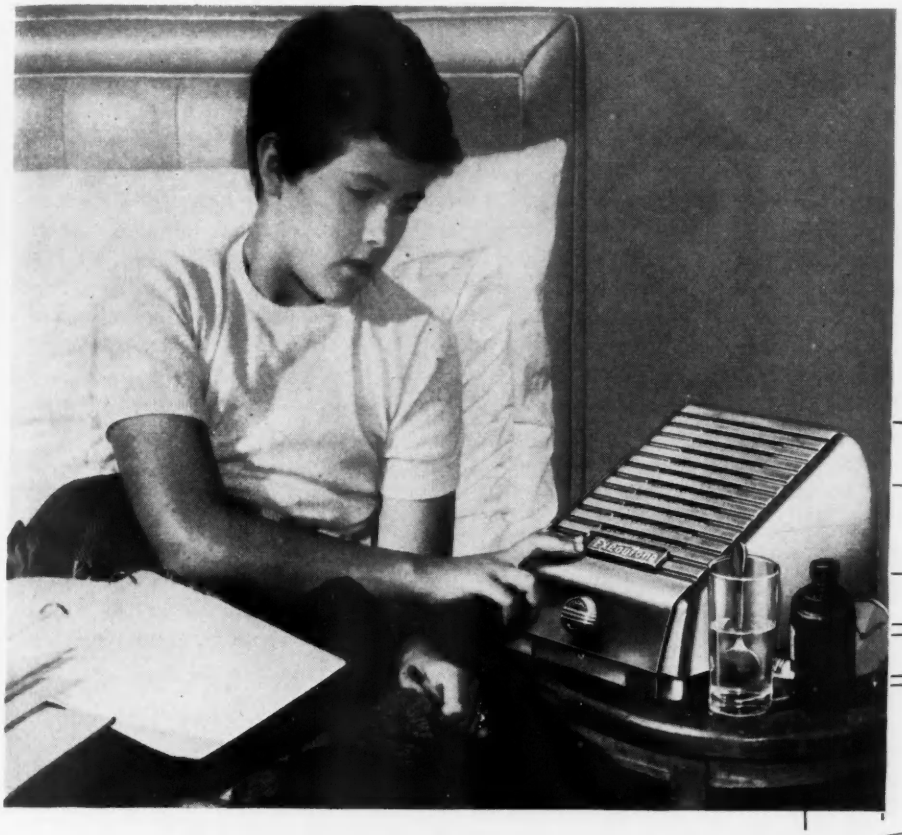
WEST COAST Tel. Co., Everett, Wash., has placed directly with institutional investors $3 million of 4 7/8% mortgage bonds due in 1985, according to Chester H. Loveland, pres. Purchasers were: Aetna Life Insurance Co., $1 million; New York Life Insurance Co., $800,000; Pacific Mutual Life Insurance Co., $500,000; New England Mutual Life Insurance Co., $300,000; Occidental Life Insurance., $200,000; and Bankers Life Insurance Co. of Nebraska, $200,000. Proceeds will be applied toward West Coast Telephone's $9 million 1957 construction program . . . Southwestern States Tel Co., Brownwood, Texas has placed with institutional investors $2 million of 5% first mortgage bonds, due 1986. New York Life Insurance Co. bought $1,200,000 of the issue; Aetna Life Insurance Co., $500,000; and New England Mutual Life Insurance Co., $300,000. Proceeds will be applied toward company's 1957 construction program, estimated to cost some $6,100,000.

Missouri Public Service Commission authorized $500,000 loan for Fidelity Tel. Co., which serves Owensville, New Haven and Sullivan, and OK'd request of Hartville Tel. Co. for permission to issue 300 shares of preferred stock at $50 a share and to borrow $246,000 from REA.

Rate Adjustments

RUNESTONE TEL. Assoc. authorized to establish schedule of rates and charges for dial service at Wendell, Tintah and Norcross, Minn. exchanges, presently owned and operated by Wendell Tel. Co. New rates will produce 3.52% return on $318,000 Fair Value base set by Commission . . . Sycamore (Ohio) Tel. Co. received authority to furnish colored telephones for installation charge of $10, with no recurring charge . . . Chisago City Tel. Co. granted authority to increase rates at Chisago City and Lindstrom, Minn., upon conversion of the exchanges to dial. New rates will produce 4.83% return on the $484,000 fair value rate base established by the commission . . . Wisconsin

She "Goes" to School by Telephone!



Executone®

NEW SCHOOL-TO-HOME SYSTEM FOR SHUT-IN STUDENTS!

Here's how to provide a real service to your community—and build strong customer relations as well. It's the Executone School-to-Home System! Executone gives your company and the school favorable publicity at no cost. It is estimated that one out of every 300 school age children is hospitalized or shut-in. Through this unique telephone system, the shut-in child can now be instructed at home—with a very simple hookup. A direct telephone line makes two-way communication possible between the home (or hospital) and the school classroom.

Executone School-to-Home equipment consists of a compact amplifier and microphone-speaker for the student, an amplifier unit for the school and a portable classroom station.

You can supply the Executone School-to-Home System to your community's schools, at modest cost. For complete information, call your Automatic representative or your nearest A. E. Sales Corporation warehouse. *Automatic Electric Sales Corporation, Northlake, Illinois.*

AUTOMATIC ELECTRIC

GENERAL TELEPHONE SYSTEM

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One of America's great communications systems

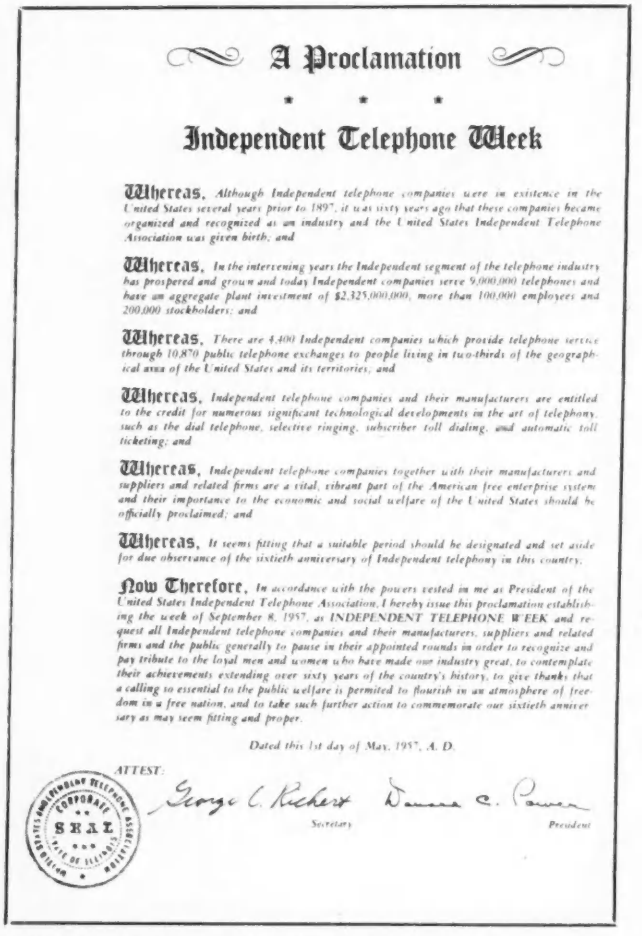
Newsletter

(Continued from page 12)

Public Service Commission approved new rates for Niagara (Wis.) Tel. Co. Niagara company has exchanges at Niagara, Aurora, Florence and Spread Eagle. Rate increase will become effective when exchanges are converted to dial operation. Commission pared down company's suggested rates, granted $19,836 net revenue for 6.6% return on investment.

Georgia Public Service Commission reduced rates of the Farmers Tel. Co., Springfield, 50 cents a month because of complaints of poor service. Rate reduction per month, per phone is effective for 60 days. Commission order said it would continue its investigation and after that time fix rates "commensurate with the service." . . . Upholding lower court decision, Tennessee Supreme Court in unanimous ruling July 29, authorized Southern Bell Tel. & Tel. Co. to collect $6,803,000 in rates which had been in effect since early May under bond. Southern Bell asked for $9,800,000 in Nov., 1954, and commission granted $2,996,000 early in 1956, in decision appealed by company. Last February, Davidson County (Nashville) Chancellor Thomas Wardlaw Steele handed down ruling in favor of company, and in May collection of additional amount under bond was authorized. Under Tennessee law, full amount of rates asked now goes into effect, until commission takes further action in a rate case.

Wisconsin Public Service Commission authorized Manitowish Waters Tel. Co. in Vilas county to increase its rates $1 a month to all subscribers. Firm, which serves resort area, will get $2,164 in increased net revenue under the authorization, PSC said. . . . Portion of Wisconsin Tel. Co.'s request for higher exchange rates, and revamping of intrastate long distance schedules to result in net reduction of revenue, were approved by Wisconsin Public Service Commission July 24. Commission's order provides for exchange rate increases of $4,603,000, and net reduction in intrastate toll revenues of $2,351,000. Company, which termed commission's action "disappointing," had asked exchange rate increases of $5,700,000, and approval of toll rate schedule changes to produce about same revenue result as those endorsed by commission. In action aimed at reducing interstate-state rate disparities in Wisconsin, commission approved plan under which station-to-station user will be charged with minimum of 40 cents a message or for three minutes at the per-minute rate, whichever is less. With other changes in mileage rate steps, the commission said, the intrastate rates will be only three to eight cents higher than interstate up to 50 miles and six to 12 cents higher over 50 miles, compared with a present level about 50% above interstate rates.



A Proclamation

* * *

Independent Telephone Week

Whereas, *Although Independent telephone companies were in existence in the United States several years prior to 1897, it was sixty years ago that these companies became organized and recognized as an industry and the United States Independent Telephone Association was given birth; and*

Whereas, *In the intervening years the Independent segment of the telephone industry has prospered and grown and today Independent companies serve 9,000,000 telephones and have an aggregate plant investment of $2,325,000,000, more than 100,000 employees and 200,000 stockholders; and*

Whereas, *There are 4,400 Independent companies which provide telephone service through 10,870 public telephone exchanges to people living in two-thirds of the geographical area of the United States and its territories; and*

Whereas, *Independent telephone companies and their manufacturers are entitled to the credit for numerous significant technological developments in the art of telephony, such as the dial telephone, selective ringing, subscriber toll dialing, and automatic toll ticketing; and*

Whereas, *Independent telephone companies together with their manufacturers and suppliers and related firms are a vital, vibrant part of the American free enterprise system and their importance to the economic and social welfare of the United States should be officially proclaimed; and*

Whereas, *It seems fitting that a suitable period should be designated and set aside for due observance of the sixtieth anniversary of Independent telephony in this country.*

Now Therefore, *In accordance with the powers vested in me as President of the United States Independent Telephone Association, I hereby issue this proclamation establishing the week of September 8, 1957, as INDEPENDENT TELEPHONE WEEK and request all Independent telephone companies and their manufacturers, suppliers and related firms and the public generally to pause in their appointed rounds in order to recognize and pay tribute to the loyal men and women who have made our industry great, to contemplate their achievements extending over sixty years of the country's history, to give thanks that a calling so essential to the public welfare is permitted to flourish in an atmosphere of freedom in a free nation, and to take such further action to commemorate our sixtieth anniversary as may seem fitting and proper.*

Dated this 1st day of May, 1957, A. D.

ATTEST:

George C. Richert — *Secretary*

Duncan C. Power — *President*

SEAL

COPY of Proclamation issued by USITA designating week of Sept. 8-14 as Independent Telephone Week.

Property Transfers

NORTHWESTERN Bell Tel. Co. purchased telephone property of Buffalo River Co-op Tel. Co. located in Moland, Oakport and Glyndon Townships, Minn. . . . Runestone Tel. Assoc. purchased rights-of-way and easements of Hereford Tel. Assoc., Wendell, Minn., and telephone properties of Wendell (Minn.) Tel. Co. . . . Chesapeake & Potomac Tel. Co. of West Virginia purchased the Inwood exchange from Duncan Tel. Co.

Vance O. Dix purchased Haines (Ore.) Tel. Co. from H. O. Wiswell. . . . John A. Myers, Glenmore, La., purchased Forest Hill (La.) Tel. Co., from G. D. Mizell, Sr. . . . Home Tel. Co., Fairview, Ohio, purchased Cumberland (Ohio) Tel. Co. . . . Wikstrom Tel. Co., Inc. purchased Halma (Minn.) Tel. Co. . . . Five telephone exchanges in Barron-Chippewa-Dunn County, Wis. border area were consolidated recently with sale of Dallas (Wis.) Tel. Co. to Chi-Bar-Dunn Co-operative Co. Other companies already taken into new co-operative were Prairie Farm, Hillsdale, Ridgeland and Sand Creek.

Alpena (S. D.) Telephone Co., sold to William Heuer, Stickney, S. D. Alpena Tel. Co., was held in partnership by Herbert Lound and Leonard Linafelter of Alpena . . . The municipally owned telephone system at Fort Frances, Ontario, Canada, has been acquired by Bell Telephone Co. of Canada.

Expansions & Improvements

STANHOPE (Ia.) Co-op Tel. Exchange will construct new $4000 building to house its new dial equipment. Co-op has started $100,926 line construction project . . . Owner James Tobin reports Citizens Tel.

60 years of service

Born in 1897 . . . the United States Independent Telephone Association is growing bigger and stronger every year.

Today, with 4300 telephone companies serving over 9,000,000 subscribers in two-thirds of the geographical area of the nation, The Independent Telephone Industry has a $2.5 billion investment that helps you reach all America.

Steadily extending its far-flung telephone network . . . developing new communications devices and techniques . . . Independent Telephone Companies grow with the ever-expanding needs of the nation.

THE American telephone industry is composed of the Bell System and the Independent companies. Bell operates essentially in the big metropolitan areas, the Independents serve mainly in the smaller towns, fast-growing suburbs, rural regions. Together, they form the world's greatest communications network.

September 8-14 is Independent Telephone Week in 11,000 U. S. Communities

GENERAL SYSTEM

GENERAL TELEPHONE SYSTEM

ONE OF AMERICA'S GREAT COMMUNICATIONS SYSTEMS • 260 MADISON AVENUE, NEW YORK N. Y.

In the Lifelines of Independent Telephony

SINCE 1897

...It's KENNECOTT Telephone Cable!

THE STORY of Independent Telephony is a story of growth and service. Ever since 1897, when the USITA was formed, Kennecott Wire & Cable has been a steady supplier to many of the 4400 member companies. On this, their 60th Anniversary, we congratulate America's Independent Telephone Companies on reaching a significant milestone. May the future be even brighter!

60 Years of Independent Telephony 1897-1957

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Charlotte	Denver	Kansas City, Mo.	New York	Providence	Waterbury
Chicago	Detroit	Los Angeles	(Maspeth, L. I.)	Rochester	

Co. completed dial conversion at Plankinton, S. D. . . . Appanoose County Tel. Co., Centerville, Ia., notified subscribers that contract with Neale Construction Co. Topeka, Kan. has been signed. Contract provides for complete rebuilding of outside plant as first step in dial conversion project. Program entails $1,500,000 expenditure for outside plant. . . . St. Stephen (S. C.) Tel. Co. completed its dial conversion project. 400 telephones in 6 communities went on dial system. Affected were old customers at Russellville, St. Stephen & Bonneau & new customers receiving their 1st telephone service at Bonneau Beach, Wilson Landing & Alvin. . . . Second large contract under Farmers' Mutual Tel. System's $2,140,000 dial system rebuilding program, namely, $340,991 for 6,000 new telephone poles and six million feet of open wires, was awarded last month, said Gen. Mgr. Warren B. French, Jr., at the Mutual System's Edinburg, Va., quarters. The first large contract, amounting to $396,000 covered dial equipment for Mutual System's six exchanges — Edinburg, Mt. Jackson, New Market, Woodstock, Toms Brook and Strasburg.

United Tel. Co. of Missouri completed dial cutover at Rolla, Mo. New dial equipment cost $800,000 plus. . . . Stayton (Ore.) Co-op Tel. Co. started $220,581.46 plant construction project. Contract was awarded to S. E. Lawrence, Oregon City. . . . Butler (Ala.) Tel. Co. started $400,000 dial conversion project. Sandridge Construction Co., Memphis, Tenn., will handle construction job. . . . North State Telephone Co., High Point, N. C. announced plans for $500,000 expansion program. . . . Southern Nevada Tel. Co., Las Vegas, is planning construction & equipment expansion program to cost at least $3,000,000 within next year, according to H.G.O. Weiler, pres.

Cokeville (Wyo.) Tel. Co. completed $70,000 dial cutover . . . United Tel. Co. completed $800,000 dial conversion project at Rolla, Mo. . . . Harold A. Jones, mgr. Mid-Missouri Tel. Co., announced plans for installation of dial service at Gilliam. $62,325.87 dial equipment contract has been awarded . . . Minnesota Tel. Co. completed dial cutover at Cannon Falls . . . Concord (N. C.) Tel. Co. completed dial cutover at Concord . . . Northwest Tel. Co. completed dial cutover at Redmond, Ore. . . . Minnesota Tel. Co. completed $372,000 dial conversion project at Cannon Falls, Minn. . . . J. Max Osborn, pres., Mille Lacs Tel. Co., Onamia, Minn., announced plans for $220,000 project.

Deaths

MATHEW L. OLLIG, 59, owner & operator of Winsted (Minn.) Tel. Co., died July 31. . . . Arthur B. Jordan, 76, v.p. of Peninsular Tel. Co., Tampa, Fla., died Aug. 2. of injuries suffered in an auto accident. . . . Mrs. R. E. Brookbank, Pendleton, Ind., wife of the past pres. of the Indiana Tel. Assoc., died Aug. 3 of injuries sustained in a fall. . . . D. W. T. Patton, 71, former general plant supt., Standard Tel. Co., Cornelia, Ga., died July 31.

Harry C. Riley, owner and mgr. Morrice (Mich.) Tel. Co., died June 8 after an illness of several weeks. Surviving are the widow, Isabella, a brother, Aaron, of Perry; two nieces and a nephew. . . . Dr. G. W. Wager, 94, grandfather of H. W. Vaughan, pres., Alabama Tel Co., Fayette, Ala.

PREPARE FOR

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WITH

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COMPUTER INTERCEPT

DIGIT ABSORBER FOR 2-5 NUMBERING

CODE TO SELECTIVE RINGING CONVERTER

DIGIT REGISTER FOR TRUNKS

APPLIED TO YOUR PRESENT EQUIPMENT

ONLY STANDARD TELEPHONE COMPONENTS ARE USED IN
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- Sectional view of Computer Intercept unit
- For 100 line TPL or 1000 station TPS installation
- Increase your Schedule "A" commissions.
- Increase available trunk usage time.
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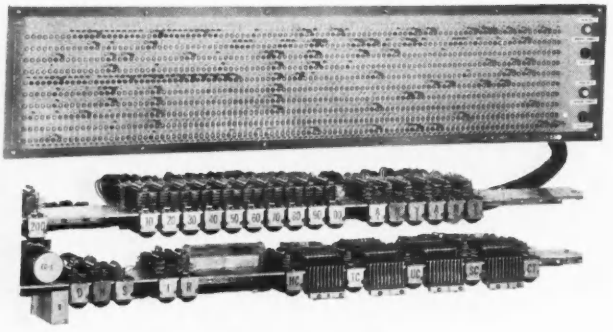
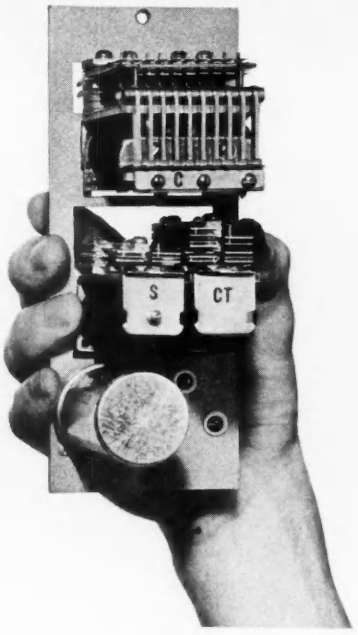




Photograph illustrates relative size of unit assembly of Digit Absorber, Ringing Converter or Digit Register.

COMPUTER INTERCEPT

Advanced technique of printed circuitry is used in this equipment to provide 100% intercept for TPL or TPS dial switching units.

The equipment is compatible with all makes of dial switchboards and can be installed anywhere in the dialing train.

Unit will handle 4 or more digits or combinations of mixed digits, and will operate with recorded announcer sets or operator positions.

DIGIT ABSORBER

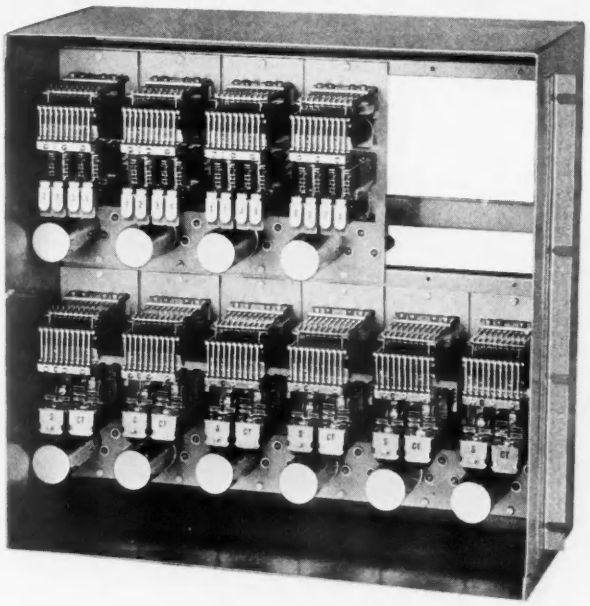
Use Universal Digit Absorbers for Universal Numbering Plans.

Units can be added to any existing dial switchboard to pad in three digits of exchange code (ABX) or four digits in the case of a small three digit dial unit.

Units are compact, fully wired, and factory tested.

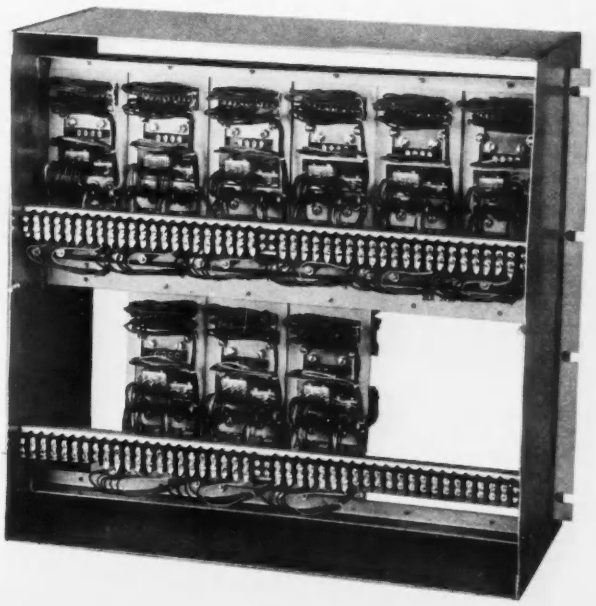
- Satisfies all 2L-5D code combinations.
- Easily installed.

UNIVERSAL CONTROLS CORPORATION



Front and rear view of typical relay case for Digit Absorber, Ringing Converter and Digit Register for mounting on standard 19" rack.

- Increase link hunting time interval.
- Eliminate partial registration of dial pulses.
- Allow maximum use of links for local calls or toll connections.



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Meet the demands of modern party line operation.

Unique application of impulse counter permits conversion of code ringing dial switchboards to full selective frequency ringing or semi-selective superimposed battery ringing.

- Increase your revenue per line.
- Improve your customer relations.
- Increase party line fill.

DIGIT REGISTER

Universal Digit Registers for Trunks insure positive supervision on dialed toll calls to tributary dial exchanges.

This equipment can be advantageously applied to "Trunk on Line" dial units where 5 or more digits are required to be delivered to a 3 or a 4 digit link in a tributary exchange.

Apparatus returns supervisory signals of Ringback Tone or All Link Busy Condition.

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- ◇ DIGIT ABSORBER
- ◇ RINGING CONVERTER
- ◇ DIGIT REGISTER

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For further details return this coupon to any of the above addresses.

The man with the $35 shoes

by John Voss

Not long ago I met a man who wore remarkable shoes.

His clothes in general were pretty good, though nothing extra special. But his shoes were really something . . . the finest I'd ever seen.

I was so curious about the contrast between those shoes and the rest of his outfit that I couldn't help asking him if he *had* to have such. He said he didn't.

"Well then," I said, "mind telling me how much you paid for your shoes?"

"$35," he answered.

"That's a lot of money for shoes," I said. "How come?"

"I figure it's actually more economical," he said. "These shoes should last me three years —with hardly any repairs. If I bought shoes for, say, $15 or so, they mightn't last more than a year, and they'd need plenty of repairing at that. So I'd be spending a lot more than $35 in three years."

Well, it's easy to see how much sense this kind of thinking makes when you buy telephone equipment. When you standardize on Stromberg-Carlson, you can *put your repair budget into equipment.*

Take our XY Dial central office equipment, for example. We're mighty proud of it. Mighty proud, too, of the fine reports we get from operating companies. Know what we hear most often about it? Well, they tell us it needs *practically no repairs.*

There's lots of proof of that statement. The XY Universal Switch—the heart of the system —is a perfect example of how this works out. You probably know about the plug-in feature of the switch and the circuit plate. Well, that makes fault locating so easy that you save on maintenance right there.

Then take the wipers. We make them with *twin contacts,* and that means the greatest reliability you can get. On top of that, we choose our materials with the greatest care and follow the highest engineering and manufacturing standards. The net result is there's just about no wear—even after more than 3,000,000 complete cycles. Why that's the same as 30 years of service!

There's more, too. We make parts like the cog roller assembly, tubular shaft, driving pawl, and ratchets of case-hardened steel. So for all practical purposes, wear is eliminated. And take the mechanism plate. We make *that* of 1/10″ steel plate—the kind that's proof against what you call mechanical fatigue.

You've no doubt heard about the vertical multiple wire banks we build into XY equipment. Well, you know, dust can't collect on vertical wires! And they never need oiling, either. The contact surfaces of the twin switch wipers don't scrape or rub, they *glide* over the smooth nickel-silver wires. No wear—you're not always replacing expensive wipers like you are in flat contact systems.

Well, I could go on and on—but I'm sure you get the idea. In all my years in telephony —as installer, systems test engineer, circuit designer, systems development head — I've never seen the equal of XY Dial equipment as an example of how my friend's idea about shoes makes real sense in your business.

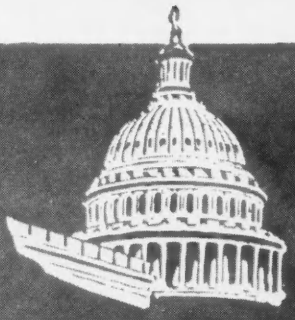
John H Voss

Vice President and General Manager
Telecommunication Division

STROMBERG-CARLSON, A Division of General Dynamics Corp., Rochester 3, N. Y.

Advertisement

WASHINGTON NEWSLETTER



Microwave Hearings

THE MICROWAVE hearings before the Federal Communications Commission have all but come to an end after a steady grind of 11 consecutive weeks of testimony in a proceeding which is being viewed as one of the most important ever to face the FCC, which is seeking to determine future allocations and usage policies for the frequency spectrum above 890 megacycles.

Proponents of private microwave systems were the last to put their views into the huge volume of the hearing record during the hearings that occupied a large part of the FCC's attention during most of the summer months before the agency took its annual recess.

Except for witnesses from the Electronics Industries Association (formerly RETMA) and the Raytheon Manufacturing Co., who are to be heard at the end of September and in early October, the hearings are now ended and the Commission is now confronted with the task of deciding the best use for the frequencies in question.

In the eleventh week of the proceedings, spokesmen for three equipment manufacturers placed principal emphasis on "freedom of choice" by users who may want to establish their own microwave communications systems.

Motorola, through its Executive Vice President Daniel E. Noble, has taken the position that "Anything except a freedom of choice approach to eligibility would kill the struggling new microwave industry," in that the establishment by the FCC of eligibility criteria on the non-availability of common carrier communications facilities "will be the equivalent of a death sentence for the independent microwave industry."

Examining "the extremes" of the choices facing the FCC, Mr. Noble declared that the "whole spectrum" above 890 mc should not be assigned to either private users or common carrier services, but rather that "the solution to our problem lies somewhere in between the extremes."

No one "wishes to deny the common carrier the use of a balanced pattern of assignment which will insure a reasonable extension of the communications service," he said, "but I believe that we all wish to deny an assignment pattern which will so restrict private enterprise that a vigorous, profitable, competitive industry cannot be maintained in support of the private user."

Mr. Noble also told the FCC that "We all have a great respect for the magnificent communications telephone systems evolved and maintained by the Bell System, but I am not willing that this should be the only system and there should not be other degrees of freedom, both within a metropolitan area, and across the country.

"I should like to feel that if sabotage or bombs destroy this highly disciplined, efficient network of the common carrier, we could resort to the use of literally a multitude of free-wheeling, alternate, independent communication means, both within the city and for intercity communications, to complement, to supplement, or even to substitute for the more sophisticated service, at the time when orderly disciplines are destroyed by atomic bombs."

In a discussion of "cream-skimming" in the microwave field, Mr. Noble took the position that "To permit the common carrier to hold the exclusive right to supply service for all private line customers where such service could be made available economically, while relegating the independent private line service supplied by independent owners, to the remote, to the difficult, to the costly, which neither the independent private line user nor the common carrier could afford, would be providing cream skimming support for a common carrier monopoly, which, to my mind, cannot be justified in terms of the public interest.

"In comparison with the common carriers who have long, heavy density radio routes, the manufacturers of microwave radio equipment for the independent point-to-point systems have been forced to exist upon a meager diet, quite inadequate to justify the cost of maintaining the substantial developmental, manufacturing, field engineering, and consulting radio engineering services which are a necessary part of the independent

One Arrow staple gun fastens them all!

ONLY ARROW'S T-25 STAPLE GUN TAKES 3 STAPLE SIZES TO FASTEN ANY INSIDE OR OUTSIDE WIRE UP TO ¼" DIAMETER!

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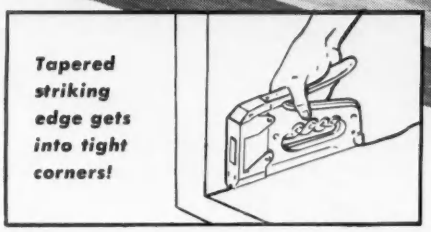

- T-25 staple gun holds ⅜", 7/16", and 9/16" round crown, rust resistant staples, a full ¼" in width.
- Safe! No short circuits possible automatic mechanism stops staple at right height.
- Short span handle provides comfortable grip – minimizes fatigue.
- Arrow tackers are jam-proof! Can't jam even when struck against metal! Never any lost time on the job. Fully guaranteed
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- Staple leg lengths are long enough to insure firm hold in wood, plaster or composition board, etc. Tack-pointed staple legs diverge to give even greater holding power.
- Check staple supply in tacker simply by looking on underside of gun.

T-25 LIST PRICE: **$15.00**

Try Arrow without obligation!

Tackers will be sent an approval for test purposes. Send request to Telephone Division.

Available at your regular supply house. Priced for volume use!

ARROW T-75 FOR ANY INSIDE OR OUTSIDE CABLE UP TO ½" IN DIAMETER!

- T-75 tacker holds 9/16", ⅝" and ⅞" tack-pointed, rosin-coated staples, a full ½" in width.
- Fastens 21 pair inside wiring cable, 26 pair, 12 pair wires, etc.
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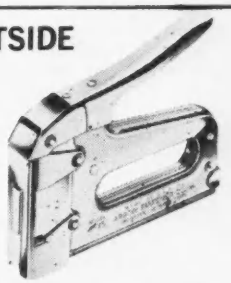

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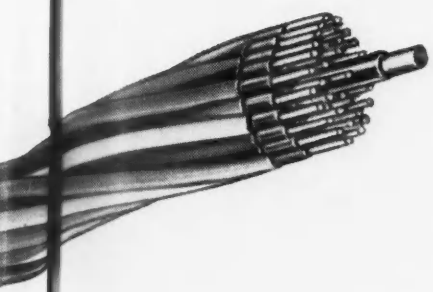
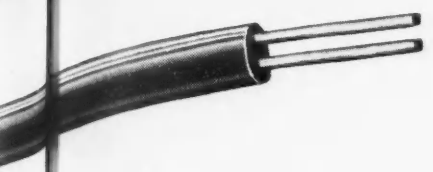


MULTI-PAIR DISTRIBUTION WIRE . . . Self supporting, available in 3, 6, 11 and 16 pair No. 19 AWG copper, polyethylene insulation and color-coded polyvinyl chloride covering.



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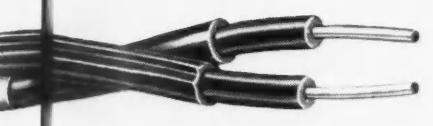
TELEPRENE® DISTRIBUTION WIRE . . . Self supporting, available in No. 14 and No. 16 AWG hard copper conductors rubber insulated and neoprene jacketed.

ARMORED TELESEAL DISTRIBUTION WIRE . . . For direct burial, in No. 16 AWG soft copper conductors with specially developed, low moisture absorbing rubber insulation. Served armor of flat steel wires, neoprene jacket.



TELESEAL® DISTRIBUTION WIRE . . . For direct burial, available in No. 16, No. 14, or No. 12 AWG hard copper conductors, specially developed, low moisture absorbing rubber insulation, neoprene jacketed.

WHITNEY BLAKE has a complete line of distribution wire to serve the Independent Telephone Industry no matter what the need may be.

From one source — WHITNEY BLAKE — telephone companies can fill all their requirements with assurance of one high standard of quality . . . quality that has again and again demonstrated that the best wire — the longest lasting wire — is far more economical than a lower priced, short lived wire that needs early replacement.

WHITNEY BLAKE telephone wires are made by experienced wire makers and have proved their value in years of long service across the nation.

60 YEARS OF INDEPENDENT TELEPHONY
INDEPENDENT
1897 — 1957

Well Built Wires Since 1899

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WHITNEY BLAKE COMPANY

NEW HAVEN 14, CONNECTICUT

Washington

(Concluded from page 18)

microwave private line business," he said. "Industry has been paying the bill for maintenance of the first-growth stage of the microwave industry while waiting for the final rulemaking for the bands above 890 mc to provide for the natural expansion of independent private line systems, under enlightened eligibility rules."

Discussing potential private use of microwave facilities, Mr. Noble declared that "While there are many potential microwave applications for private-user systems which include intercity and long distance systems required for industrial, transportation, and power system control, dispatch and protection, I think that the largest independent demand for microwave will be the short-haul single hop systems for intracity communications between departments or facilities operated by single manufacturing or service corporations." In these systems, he elaborated, "direct point-to-point terminal-to-terminal operation will be the rule, with possibly some two and three hop systems where hills or other obstructions prevent direct-line single-hop systems."

Even if carried to its fullest extreme, Mr. Noble went on, "The development of independent private line radio and microwave service cannot have a significant effect upon general telephone service. I . . . suggest that we should be far more concerned about the necessity for limiting the expansion of the common carrier monopoly than about the slight effects of desirable competition upon common carrier revenues."

He forecast that "the total percentage of business . . . resulting from a vigorous growth of independent private systems, might conceivably equal 3% of the extrapolated (Bell System) revenue for the year 1966," allowing a "10-year growth of private system ownership with full freedom of choice." This 3%, he said, "would be a very small price to pay for the multitude of benefits derived."

General Electric has also taken the stand that "unless the FCC has received concrete evidence of the shortage of these frequencies" it believes "it is the Commission's burden to make (microwave) available to as large a segment of the public as possible."

Probably the most liberal interconnection with common carrier facilities asked by any of the parties to the proceeding was proposed by Westinghouse Corp. in its appearance before the FCC. Westinghouse took the position "that if the private user is permitted to operate his own system and interconnect his system with the common carrier, he will provide himself with increased communications facilities that actually will generate more total business for the common carriers than they have now."

Senator Humphrey Speaks Up

SHARP CONGRESSIONAL criticism, led by Sen. Hubert Humphrey (D., Minn.) has been directed against the Department of Agriculture for its reported policy that all first loans by the Rural Electrification Administration, both for telephone and electrification purposes, and all other loans of over $500,000, must be approved by the Secretary of Agriculture.

Criticism has centered on the view, although the procedure apparently is authorized under the Agriculture reorganization act of several years ago, that this waters down the authority of the REA Administrator and puts control of REA lending policies into the hands of Agriculture Secretary Ezra T. Benson and some of his assistants.

In particular, one target has been former Rep. Wesley D'Ewart of Montana, now an assistant to Secretary Benson, who is described by those interested in rural cooperatives as opposed to the REA program.

Senator Humphrey has announced his intention to hold full-scale hearings on policies of the Eisenhower administration in connection with REA loans and in a Senate floor speech he strongly criticized the review policy.

Busy Days Ahead

THE US INDEPENDENT Telephone Association says that economic forecasts indicate that the Independent branch of the US telephone industry, which now serves about 9,500,000 telephones, may have nearly 12,000,000 by the end of 1960, and may have in operation 26,000,000 telephones by 1975.

The projections, USITA reports, are based on analyses of the telephone industry as a whole, and take into account both long-term forecasts of population and economic growth and market potentials which may be realized through merchandising and sales promotional efforts by the Independents.

The forecasts are based on projections of a 222,000,000 population by 1975, with a gross national product of $760 billion. They assume no major war or depression.

1956 Station Gain 3,947,000

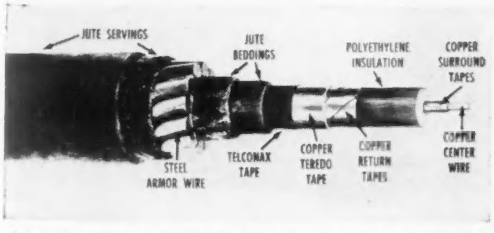
TOTAL TELEPHONE gain in U. S. in 1956 was about 3,947,000, according to statistical report issued by AT&T Co. Approximately three-fourths of gain was in residence telephones — one-third of which was a gain in extensions. Number of households with telephone service increased by 1,874,000. Continued penetration of unsold telephone market has resulted in steady increase in proportion of households with service. On Jan. 1, 1957, 76% of total households had telephone service as compared with 73% a year earlier, and 61% at beginning of 1950. Proportion of households with service varies widely by company and among large exchange areas.

Cable leaving ship's stern must withstand the rigors of installation and give long, efficient service. BAKELITE polyethylene plays a vital role in meeting these requirements. American portion of Trans Atlantic Cable supplied by **Simplex Wire and Cable Co.**, Cambridge, Mass.

How BAKELITE Polyethylene serves . . .

On the bottom of the Atlantic Ocean

The electrical and physical properties combined in BAKELITE Brand Polyethylene Compound DFD-6505 make it especially useful for service in submarine cable. Its insulation values are excellent and its rate of moisture absorption extremely low. Physical properties, such as light weight, flexibility and resistance to cracking at low temperatures, further equip it for the rigorous installation and operational requirements imposed by the undersea environment.



Cutaway photo shows complex structure of this cable.

These are some of the reasons why Bakelite Polyethylene DFD-6505 is being used for the inner insulation of the American segment of the North Atlantic telephone line and the Alaskan cable, reaching 1600 miles between the state of Washington and Alaska. Since 1950, over 4,000 miles of submarine cable have been insulated with DFD-6505.

BAKELITE Brand Polyethylene and Vinyl covered wire and cable meet the demands of the telephone and communication industries. To keep informed about the latest developments, you can receive regular copies of Kabelitems and other pertinent technical data. Simply send your request to Dept. XJ-183.

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STATE OF MICHIGAN

Executive Office □ Lansing

PROCLAMATION

INDEPENDENT TELEPHONE WEEK

Sixty years have passed since the organization of the United States Independent Telephone Association. Today more than nine million telephones are served by Independent Telephone Companies.

Independent Telephone Companies add materially to the economic strength of our country with an investment in plant of $2,325,000,000 and of our state with an aggregate capital investment of $82,000,000.

Independent Telephone Companies are responsible for many major developments in the vital field of rapid communication. Among these are the automatic dial telephone, selective ringing, automatic toll ticketing and direct distance dialing.

Independent Telephone Companies together with their manufacturers, suppliers and related firms are an integral part of the American way of life and our free enterprise system. In Michigan, 117 Independent Telephone Companies serve sixty per cent of the state's land area.

THEREFORE, I, G. Mennen Williams, Governor of the State of Michigan, do hereby proclaim the week of September 8 to 14, 1957, as

INDEPENDENT TELEPHONE WEEK

in Michigan, and heartily commend those many citizens of Michigan engaged in the Independent Telephone Industry and urge that fitting tribute be paid to them during this 60th Anniversary Celebration.

Given under my hand and the Great Seal of the State of Michigan, this Seventh Day of August, in the Year of Our Lord, One Thousand Nine Hundred Fifty-seven, and of the Commonwealth the One Hundred Twenty-first.

G. Mennen Williams

GOVERNOR

BY THE GOVERNOR:

John B. Martin

SECRETARY OF STATE

STATE OF MINNESOTA

EXECUTIVE DEPARTMENT

A Proclamation for Independent Telephone Week

WHEREAS, sixty years ago the independent telephone industry became organized and recognized as an industry and the United States Independent Telephone Association came into being; and

WHEREAS, in the intervening years the independent segment of the telephone industry has grown until today independent companies serve about 9,000,000 telephones and have an aggregate plant investment of $2,325,000,000, more than 100,000 employees and over 200,000 stockholders; and

WHEREAS, there are 4,400 independent telephone companies which provide telephone service through 10,870 public telephone exchanges to people living in two-thirds of the geographical area of the United States and its territories; and

WHEREAS, there are 266 independent telephone companies in the great State of Minnesota, owning and operating 532 exchanges serving some 240,000 Minnesota telephones; and

WHEREAS, independent telephone companies along with their manufacturers, suppliers and related firms are a vital, vibrant part of the American free enterprise system and are entitled to credit for numerous significant technological developments in the art of telephony such as the origin of the dial telephone, developments in selective ringing on multi-party lines, subscriber toll dialing, automatic toll ticketing; and

NOW, THEREFORE, I, Orville L. Freeman, Governor of the State of Minnesota, do hereby proclaim, the week of September 8 - 14, 1957, as

INDEPENDENT TELEPHONE WEEK

and urge that fitting and proper tribute be paid during this sixtieth anniversary observance of the Independent Telephone Industry.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Greate Seal of the State of Minnesota to be affixed at the State Capitol, St. Paul, on this twenty-fourth day of July in the year of our Lord one thousand nine hundred and fifty-seven and of the state, the one hundredth

ATTEST:

Orville L. Freeman

GOVERNOR

Joseph L. Donovan

SECRETARY OF STATE

STATE OF INDIANA

EXECUTIVE DEPARTMENT

INDIANAPOLIS

EXECUTIVE ORDER No. PROCLAMATION

FOR: INDEPENDENT TELEPHONE WEEK - SEPTEMBER 8-14, 1957

TO ALL TO WHOM THESE PRESENTS MAY COME, GREETING:

WHEREAS, the independent telephone companies of America were organized sixty years ago and were recognized as the United States Independent Telephone Association; and

WHEREAS, the 4,400 independent telephone companies of the United States currently provide vital services to almost 11,000 cities and towns; and

WHEREAS, the 230 independent telephone companies in Indiana serve approximately seventy-three per cent of the area of the Hoosier state; and

WHEREAS, the independent telephone companies in Indiana have approximately 600,000 of the approximate total of 1,600,000 telephones in Indiana; and

WHEREAS, the independent telephone companies and their manufacturers have developed numerous and significant technological advances in the art of telephony; and

WHEREAS, the independent telephone companies in this state and nation together with their manufacturers, suppliers and related firms are a vital part of the free enterprise and defense system of the United States and the economic and social well-being of the country;

NOW, THEREFORE, I, Harold W. Handley, Governor of the State of Indiana, do hereby proclaim September 8-14, 1957, as INDEPENDENT TELEPHONE WEEK in Indiana, and I urge that proper tribute be paid during this sixtieth anniversary celebration to the independent telephone companies of our state and to their loyal employees who through their devotion to duty in time of peace and war over a period of sixty years have done so much for the welfare of our state and nation and our free enterprise system.

IN TESTIMONY WHEREOF, I HAVE HEREUNTO SET MY HAND AND CAUSED TO BE AFFIXED THE GREAT SEAL OF THE STATE OF INDIANA, AT THE CAPITOL, IN THE CITY OF INDIANAPOLIS, THIS 25th DAY OF June 19 57.

Harold W. Handley

GOVERNOR OF INDIANA

BY THE GOVERNOR

Frank C. Dunning

SECRETARY OF STATE

PROCLAMATION

WHEREAS, since its inception sixty years ago, the United States Independent Telephone Association's services have soared--today benefiting more than nine million phone-owners, and

WHEREAS, independent telephone companies now provide phone services to nearly eleven thousand cities and towns throughout the country, and

WHEREAS, these companies and their manufacturers are responsible for many significant technological developments in the art of telephony. Among these are the dial telephone, selective ringing, subscriber toll dialing and automatic toll ticking, and

WHEREAS, together with their manufacturers and suppliers and related firms, independent telephone companies are a vital part of the American free enterprise system and the economic and social well-being of the United States;

NOW, THEREFORE, I, JAMES T. BLAIR, JR., GOVERNOR OF THE STATE OF MISSOURI, do hereby proclaim the week of September 8-14, 1957, as

"INDEPENDENT TELEPHONE WEEK"

in Missouri, and urge that proper tribute be paid during this 60th anniversary celebration to the loyal men and women of the great independent telephone industry.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Missouri, in the City of Jefferson, this 12th day of June, 1957.

J. T. Blair, Jr.

GOVERNOR

ATTEST:

Walter P. Toberman

SECRETARY OF STATE

Will Davis

CHIEF CLERK

MANY STATE governors issued proclamations declaring Week of Sept. 8 to 14, 1957, as Independent Telephone Week. Shown above are proclamations issued by Governors of Michigan, Minnesota, Indiana and Missouri.

Where Is the Guy who put up this guy?

He's doing something else—
maybe he's putting up another one.
Anyway, he did this job all alone
in less than five minutes—
by himself.

STRANDVISE is made
for strand sizes 3/16", 1/4", 5/16", 3/8", and 7/16"
NO MATTER THE GRADE.
Please pick your size, fill in
the coupon and mail it today.

Reliable

Reliable Electric Company
West Carroll Avenue
Chicago 12, Ill.

Mr. Reliable:

WE DON'T BELIEVE IT BUT—we want to give STRANDVISE a fair trial. You may send 4 of them size ( ) without charge. Better send your instructions for installing and a catalog-price sheet, too.

Signed_____

Company_____

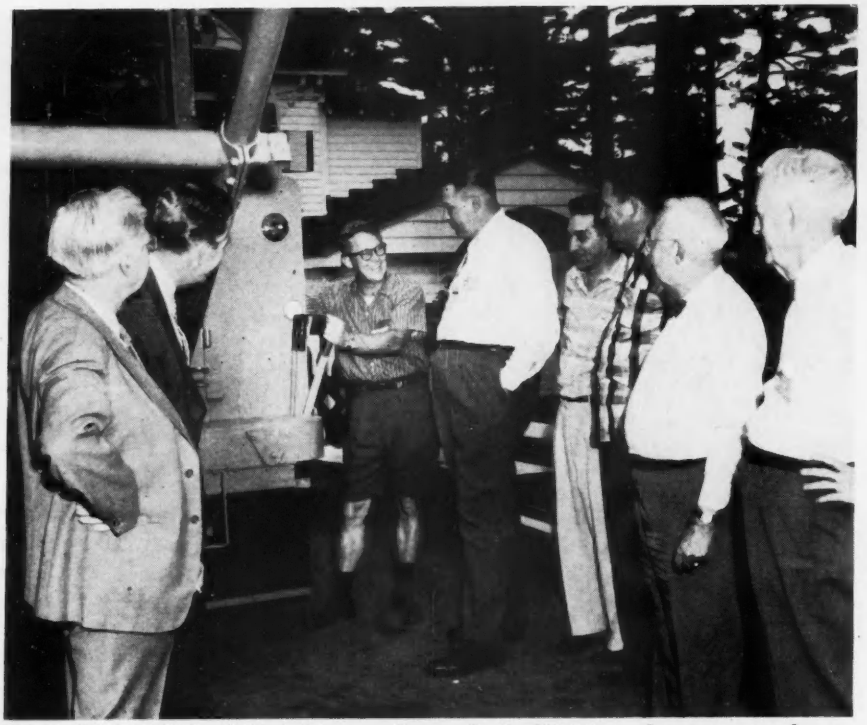
Street No._____

City_____ State_____

60 YEARS OF INDEPENDENT TELEPHONY 1897-1957

This STRANDVISE guy was put up complete before any tensioning tools were applied to the strand

PEOPLE IN THE NEWS

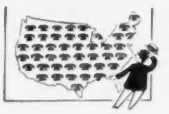


TOM CUMMINGS of York-Hoover Corp., Body Division, demonstrates heavy construction equipment for an interested group of New York Conventioners. (l. to r.) CLIFFORD SAYER, HAMILTON A. CUNNINGHAM, TOM CUMMINGS, STANLEY R. SWANSON, EARL BARRY, C. S. CANFIELD, WILLIAM A. SEELY, and JOHN A. BARRY.

ROBERT K. MORGAN has joined Reilly Tar & Chemical Corp., Indianapolis, Ind., as sales representative in the Eastern territory. He will work out of the company's Tuckahoe, N. Y. office. Mr. Morgan has just returned from a tour of duty with the Navy. Prior to that he was a student at Fairfield University, Fairfield, Conn., from which he graduated in 1954.

GILBERT G. GRAY has been named a staff engineer with Automatic Sales Corp. He joined Automatic Electric Company in 1939 and has since served as testing and laboratory technician, apparatus and equipment engineer, and as supervisor of equipment proposal engineering. He is a registered professional engineer in the state of Illinois.

PRESIDENT OF THE California Independent Telephone Association for the 1956-57 term, FRED H. MacGOUGAN, delivers the president's address to members on the first day of the three-day convention. Mr. MacGougan of California Water & Telephone Co. resides in Monrovia.



COMING UP

Independent

TELEPHONE WEEK

Sept. 8-14

HAROLD STOUFFER, Pres., Missouri Telephone Association addresses recent joint convention of Missouri-Kansas associations.

CALIFORNIA PLANT PANEL (from left to right): DONALD H. STRAHL, Gilroy Telephone Co.; HAROLD C. DIDDEL, The Pacific Telephone & Telegraph Co.; WILLIAM W. STAHL, chairman, California-Pacific Utilities Co.; HAROLD O. DAVIS, Western California Telephone Co. and GEORGE W. HARRISON, General Telephone Co. of Calif.

VICE PRESIDENT ALBERT N. SEWARD, President C. RAY LLOYD and Executive Secretary HAMILTON A. CUNNINGHAM (l. to r.) seem to enjoy a joke from someone's "black book," in pleasant surroundings during the 35th Annual Convention of New York State Telephone Association at Scaroon Manor.

IN THE OPEN-AIR AMPHITHEATER, O. TOWNSEND MACMILLAN addresses the second session, of recent New York Convention. Seated (l. to r.): Vice President ALBERT N. SEWARD; Commissioner AARON L. JACOBY, Judge JOHN E. HOLT-HARRIS, and Executive Sec. HAMILTON A. CUNNINGHAM.

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designed and built as wall phones

The new North Wall Telephone is a true wall telephone, designed as a wall telephone, built as a wall telephone, sold as a wall telephone.

It is not a desk set hung on a wall, nor is it an adaptation or "version" of a standard phone.

The clean "picture frame" simplicity of the case is unmarred by moulded handset-hangers, brackets, or cut outs.

The gleaming, chromium plated hookswitch is located on the front of the instrument for greatest convenience.

North's Wall Telephone, with the new North universal base, is interchangeable with North's desk telephone (except for the case, hookswitch and dial plate adapter), and the new base will accommodate most single coil high frequency ringers.

North Wall Telephones come in seven Color-Tones, Richland Red, Emperor Blue, Chartreuse Yellow, Tawny Green, Indian Ivory, Coral Sand, and Executive Grey, as well as black. They add color and convenience to kitchens, dens, family rooms, workshops, and garages.

North Wall Telephones in Color-Tones or black are now available from stock for quick delivery.

NORTH ELECTRIC COMPANY

655 SOUTH MARKET STREET • GALION, OHIO

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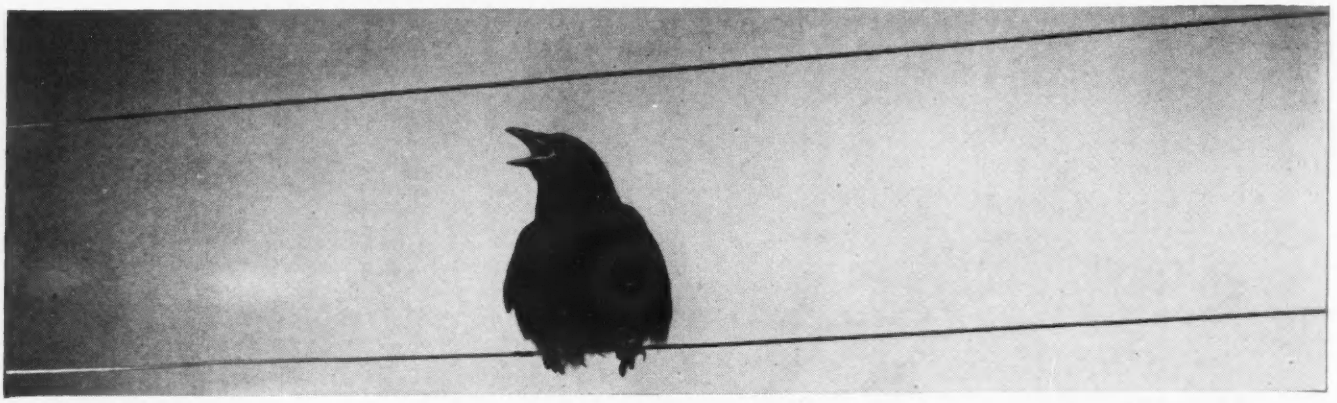
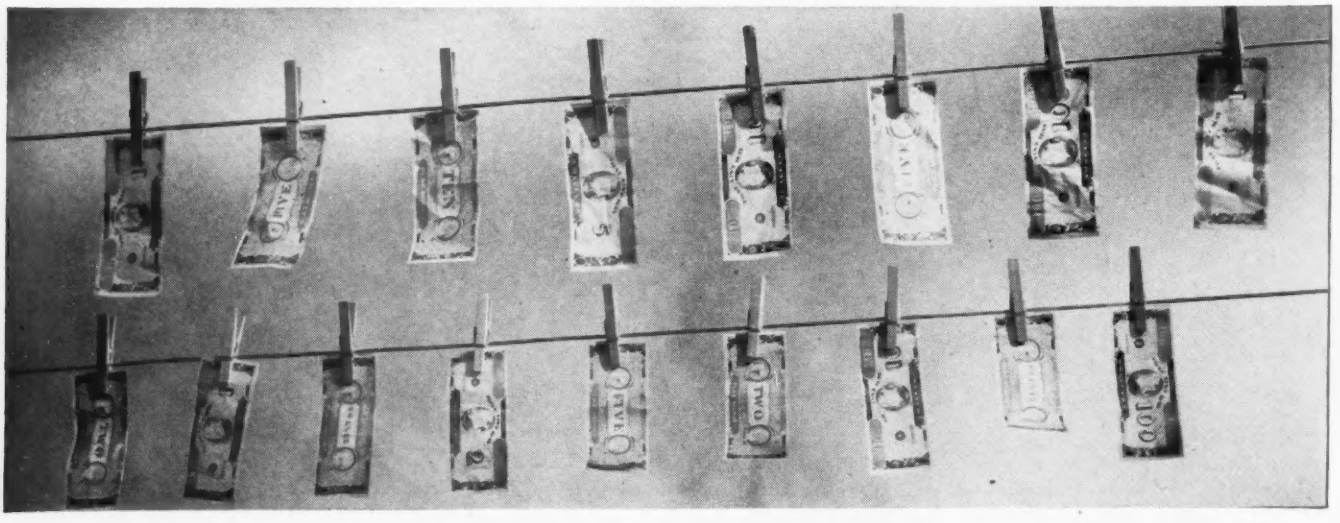
DEF 3
JKL 5
ABC 2
MNO 6
1
FR6-1131
PRS 7
TUV 8
WXY 9
OPERATOR 0

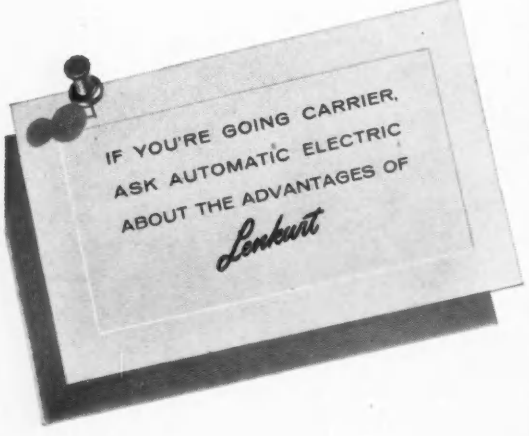
Your present wires



can carry more toll revenue



with LENKURT carrier



Before you go to all the expense of laying cable or planting poles to add new toll circuits, we suggest you get the Lenkurt story from an Automatic Electric engineer. Because with Lenkurt Carrier you can add dozens of profitable new toll circuits, probably without stringing wire or disturbing a square inch of real estate.

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As the distributor of Lenkurt equipment, Automatic Electric offers "carrier without complications"—engineered, furnished and installed.

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GENERAL SYSTEM

EDITORIAL

"Independent Telephone Week"

WE HOPE the "Open House" crowds will be big and the lights will burn bright and long during the week of *September* 8-14 as the achievements of America's Independent Telephone Industry are recognized throughout the nation by the participation of subscribers and telephone company personnel in activities scheduled for *Independent Telephone Week.*

The week of September 8-14 is an important week for the Independent Telephone Industry. In the sixty years since Independent telephone companies came into existence, their accomplishments and the importance of the service they provide has received too little public attention.

In fact, until the United States Independent Telephone Association (USITA) launched its publicity campaign in 1954 the industry languished in anonymity and to the "man on the street" the word telephone meant Bell System.

As a result of the USITA publicity program, the "man on the street" now knows the telephone requirements of the U.S.A. are handled by the Bell System and 4,390 *Independent telephone companies* which operate over 9,000,000 *telephones* and 10,870 *exchanges, serve about two-thirds of the area of the United States,* and *employ nearly* 101,000 *men and women.*

It is the members of that group of 101,000 men and women who should be congratulated as the nation pauses during the week of September 8 to salute the Independent telephone industry. To a large extent the employes themselves are responsible for the salute.

Actually, in the final analysis it is the telephone employes who have had, and will continue to have, the destiny of the telephone art in their keeping. Therefore, we believe it is right and proper that the men and women who make up the personnel of the Independent telephone industry deserve a special round of applause during Independent Telephone Week.

The stature of today's modern Independent telephone industry is based on the fact that the telephone group as a whole has shown a continuity of purpose and a determination to carry on certain traditions which have aided the industry's growth in the past and are bound to be influential in the coming years.

The accomplishment records of the past and of today prove that since 1896 the Independent telephone group in America has grown from a few hundred persons into a vast army of skilled workers which embraces in its ranks a remarkably wide range of special talents.

And the records also prove that various as are the tasks of the Independent telephone group its members have been, and are moved by a common purpose — *to get the message through in the best possible way and the shortest possible time.*

Among telephone workers, this sense of responsibility has been and is strong. And this is as it should be, for from its very nature, telephone service is an intimate, personal service. Unlike the written message, which is but the shadow of speech, the spoken word lives and has personality.

The men and women of the telephone group never know, moreover, the importance of the messages they are called upon to speed upon their way. Telephone calls carry no special delivery stamps — nothing to indicate what connection may involve a matter of life or death; nothing to foretell the far-reaching results that may follow failure to get every single call through to its destination.

With those who make this personal and vitally important service possible, we well know that fidelity to duty reaches far beyond mere pride in doing one's job as well as it may be done. In truth, it arises from a sense of the dependence of the public upon each individual telephone worker and throughout the land it is expressed in a loyalty that manifests itself in a hundred ways in the day-to-day routine of telephone life, and that, in times of emergency, often rises to the highest form of heroism.

After years of observing such an industrial group in action, with its superb equipment, dynamic tradition and sound morale, we are sure, beyond all question, that the future of the telephone will not belie its inspiring and influential past. Also, we are sure that as we said a few paragraphs back — "the personnel of the Independent telephone industry deserve a special round of applause during Independent Telephone Week. . . ."

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Long distance

Our lines reach all the way back to 1897 . . . when early Independent telephone companies formed a national association to share ideas and experience . . . to keep pace with a fast-changing America. Today, 4,400 Independents own a $2.5 billion stake in America's future—serve more than nine million telephones throughout *two-thirds of the entire area of our nation.*

60 Years of Growing Service 1897-1957

September 8-14 is Independent Telephone Week in 11,000 U.S. communities.

INDEPENDENT TELEPHONE COMPANIES

helping you reach all America

U.S. Independent Telephone Association
Pennsylvania Building, Washington, D.C.

PAST—PRESENT—FUTURE

By LEON F. ROBERTS*

WITH THE Nation preparing to participate in Independent Telephone Week, we asked USITA's Director of Information — "What does the future hold for the Independent telephone industry?" He replied with this article which forecasts a bright future which may find the industry serving 12½ million phones by 1960.

IT PROBABLY has been a long time since you read Lewis Carroll's "Alice in Wonderland" and "Through the Looking Glass," but you may recall the advice once offered by the Red Queen, who was mad about grand tours, but only in her own country, to her young traveling companion, who complained about never going anywhere else:

> "Well, in our country," said Alice, still panting a little, "you'd generally get to somewhere else — if you ran very fast for a long time, as we've been doing."
>
> "A slow sort of country!" said the Queen. "Now here you see, it takes all the running you can do to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that."

Telephone people who have been on the station-gain treadmill since — well, practically since V-J Day in 1945 — know full well what the Red Queen meant. We have been running as fast as we could to stay in the same place, and in order to get somewhere else we've had to run at least twice as fast as that. This goes for plant investment, revenues, and yes, expenses, too. Nevertheless, the telephone industry has made great strides in its hastily-donned seven-league boots that even the Red Queen would envy.

As national Independent Telephone Week approaches, and as the United States Independent Telephone Association pauses to observe the 60th Anniversary of its founding, it seems appropriate that we pause to measure the length of those strides, take a look backward, see how far we have come, and, more important, determine as well as we can what the future holds for the telephone industry in general and for the Independent segment of the business in particular.

Yesterday vs. Today

NOT SO LONG AGO — at least so it seems to pioneer telephone men, some of whom are still active altho many have left the scene — a man and his wife, some-

Mr. Roberts is Director of Information, U. S. Independent Telephone Association, Washington, D. C.

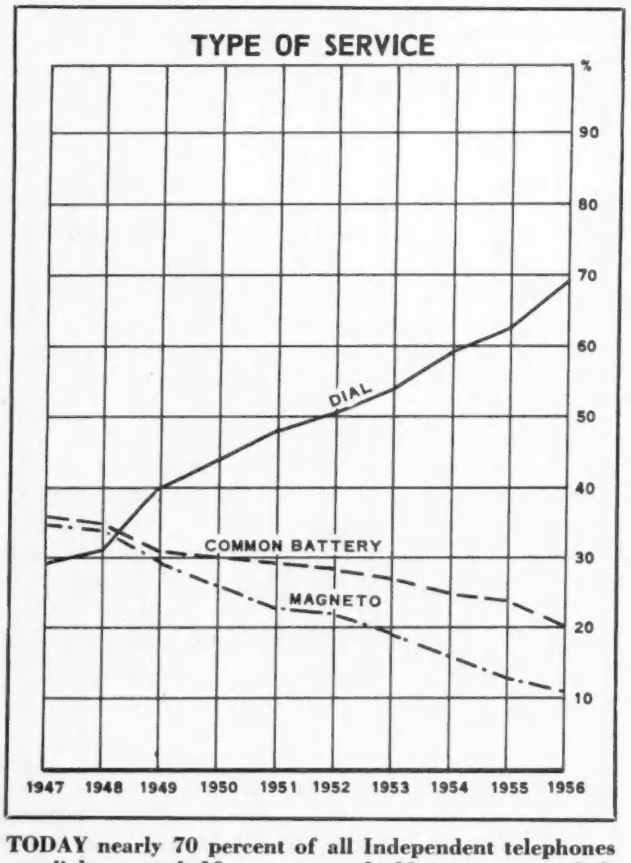
times with the assistance of a son or a daughter, could manage and operate a tolerably good telephone system. Running a telephone plant was a fairly simple and rewarding kind of business. It was built around land wires and pole lines, linking telephone instruments in the subscribers' home, or place of business, with a central switchboard and a few toll circuits.

Today, all this has changed, because the telephone business has grown into a vast and complicated operation requiring highly specialized services of various talents and professions. From the basic land wires and pole lines, traffic now goes through the air, under ground, over seas, and under seas, as our engineers employ the magic of radio, microwave, carrier, coaxial cable, operator toll dialing, direct distance dialing, and other wonders of the electronic age.

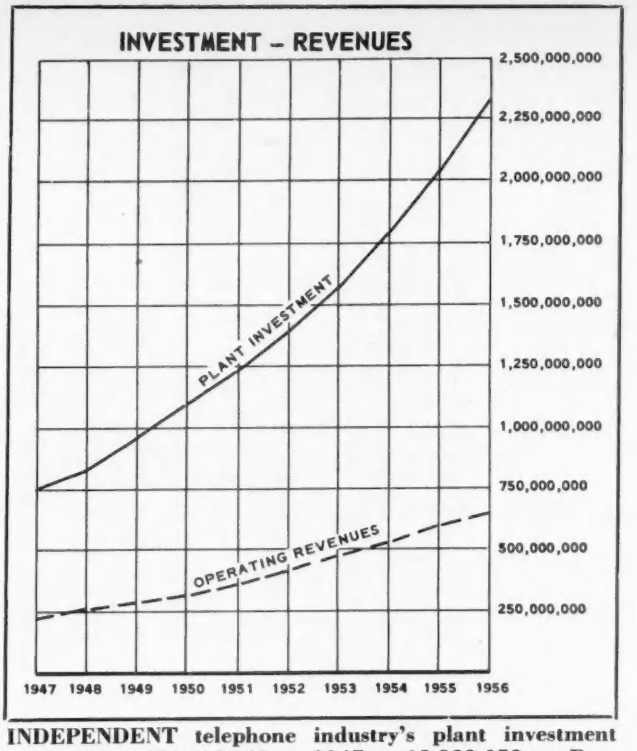
Such progress is not without its casualties, and the changed situation is pointed up by this economic development: the number of Independent telephone companies is shrinking sharply. Today there are 4,400 companies, compared with 6,082 as recently as 1945, and with 8,260 companies in 1925.

But through mergers, modernization, and other means the Independent telephone industry is growing and prospering, as attested by the gain in the number of telephones served, total plant investment, revenues, and improved type of service, as graphically illustrated in the accompanying charts. From these charts and other substantiating statistics for previous years it is easy to see how, during the past 60 years, the Independent telephone industry and its national voice, the United States Independent Telephone Association, have developed into a major force on the American scene.

Today our 4,400 companies are serving approximately 9.5 million telephones in 11,000 communities.



TODAY nearly 70 percent of all Independent telephones are dial operated. 10 years ago only 29 percent were dial.



INDEPENDENT telephone industry's plant investment grew from $750,697,000 in 1947 to $2,323,052 on Dec. 31, 1956.

These companies own nearly 2.5 billion dollars worth of plant and equipment, and provide jobs for 100,000 persons. Nearly 70 percent of our telephones are dial operated, and hundreds of conversions are under way.

All this has not been accomplished without some severe growing pains and today those pains are becoming more acute as "tight money" and inflation are making more difficult the expansion the telephone-using public demands. But history and experience indicate it will take more formidable and insurmountable problems than these to stop our progress. For the telephone industry time and again has proved Washington Irving's sage observation: "Little minds are tamed and subdued by misfortune, but great minds rise above it."

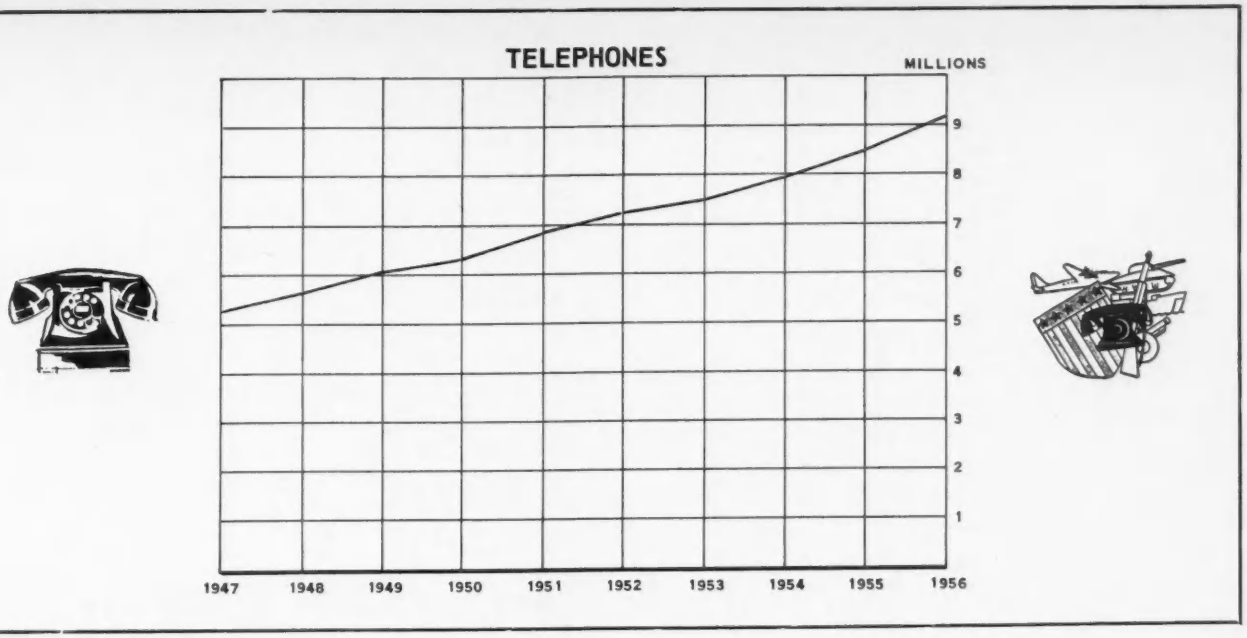
Future Portends Greater Growth

AND IT WAS Oliver Wendell Holmes who said: "I find the great thing in this world is not so much where we stand, as in what direction we are moving." Long before Holmes penned those words, the immortal Tennyson had observed: "Men, my brothers, men, the workers, ever reaping something new; that which they have done but earnest of the things that they shall do."

What about the future? What about the "things that they shall do?" An intelligent look ahead tells us it is upon the horizon of the future that the opportunities of the Independent telephone industry are brightest of all. And we have many signs which we can follow to chart our course.

If present population growth and economic trends continue as they are generally expected to do by the country's leading economists and statisticians, the Independent telephone industry, which now serves approximately 9½ million telephones, may be serving nearly 12 million telephones by the end of 1960, and may have in operation some 26 million telephones by 1975.

These projections are based on analyses for the tele-



ON JANUARY 1, 1957 about 9,111,763 of the nation's telephones were operated by Independent telephone companies.

phone industry as a whole, and represent market potentials that may be realized if promotional efforts are geared to tap the prospective economic growth of the country. If all the expected conditions hold true to their course, the total telephones in the U. S. by 1975 may be more than 2½ times the total in service in 1956. Over one-half of this potential gain is likely to consist of residence extensions.

This long-term outlook includes the following projections of basic economic and population data:

	Gross National Product (Billions)	Personal Income (Billions)	Population (Millions)
		(1955 dollars)	
1960	*$460*	*$365*	*179*
1965	*550*	*435*	*192*
1970	*650*	*515*	*206*
1975	*760*	*600*	*222*

There are a number of "ifs," "ands," and "buts," of course, in these economic projections. It is assumed, among other things, that there will be no major war, or major depression, and that inflationary pressures will be controlled before a disaster point is reached.

While this review is primarily concerned with the Independents, it would not be complete without a look at the whole picture, the larger portion of which, of course, is painted by the Bell System. If the same factors, i.e., gross product, personal income, population, and anticipated rate of station growth are applied with the same reasoning by which was calculated the Independents' growth during the next 18 years, the Bell System, which now has nearly 53 million telephones, would have 63 million telephones in 1960, 86 million telephones in 1965, 112 million in 1970, and 135 million telephones in 1975. Just visualize it if you can — 222 million people communicating with each other in this country just 18 years from now over 160 million telephones! It's something to think about!

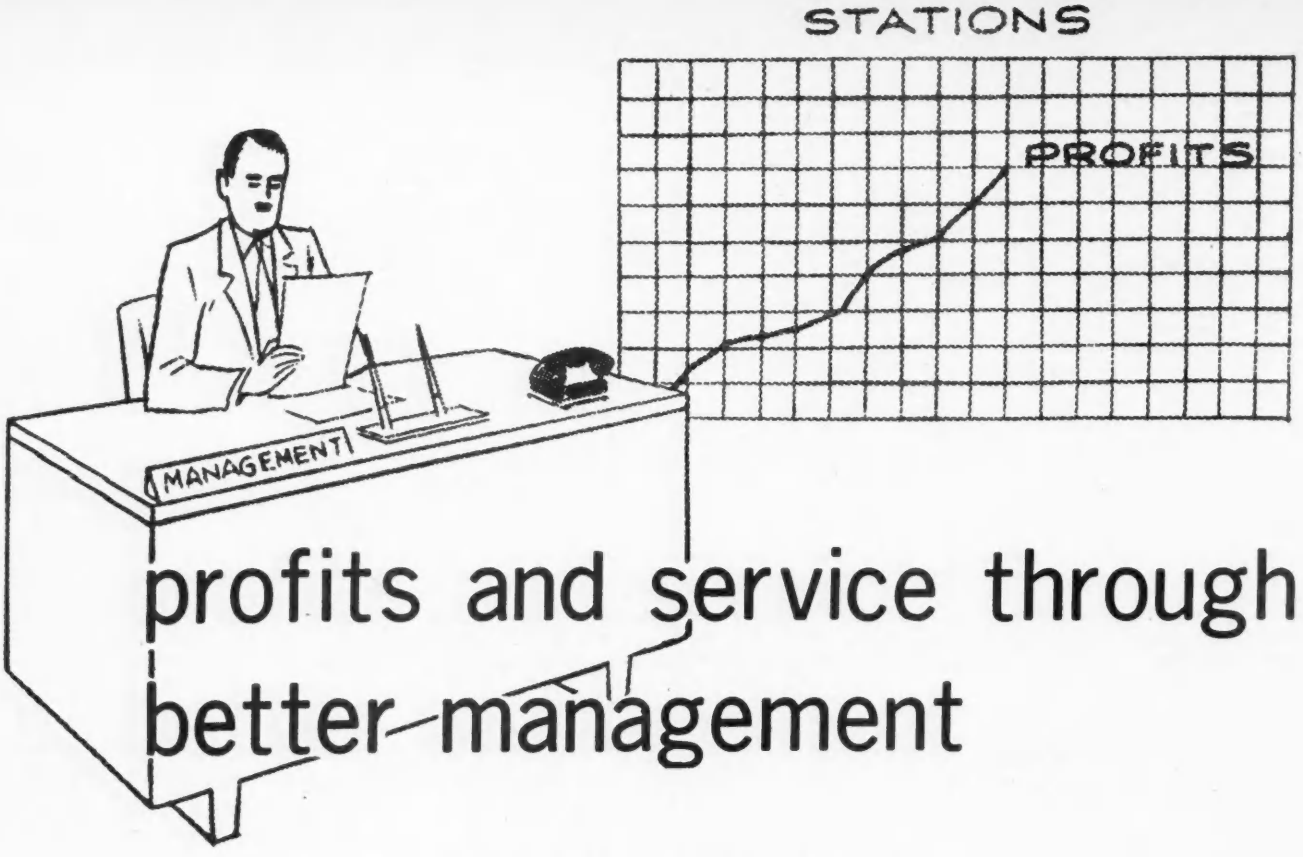
Getting back to the Independents and their projected 12 million telephones by the end of 1960, with 26 million telephones in operation by the end of 1975. The figures, and they are not fantasy, point up this startling possibility: the number of telephones we have in operation in 1960 will more than double during the subsequent 15 years.

This, then, is our potential. Whether we realize it in full depends upon many things. Whether we achieve our goal or not, this much seems certain: during the coming years the telephone industry will continue to grow and at a more rapid rate than we ever have anticipated — even in our wildest dreams. With the increase in population everybody anticipates for the years immediately ahead, and with the diffusion of this population over the entire land area of the country, particularly in the rural and suburban localities where so many of our companies are located, with the possibilities of increased usage of telephone equipment promoted by aggressive sales and merchandising efforts, the future of the Independent telephone industry looks very good, indeed.

Perhaps it all can best be summed up in the homespun philosophy of a Washington cab driver. He and his fare drove up in front of one of the capital's many government buildings, across the imposing facade of which was elegantly inscribed in stone these words: "What's Past is Prologue." Said the fare, musingly, "I wonder just what that means?" I'm not sure," replied the cabbie, "but I think it means 'we ain't seen nuthin' yet!' "—*Leon Roberts.*

Worth Writing For

WRITE Kato Engineering Co., Dept. T-E-M. Mankato, Minn., for catalog sheet describing new Kato converter. Unit weighs only 39 pounds. It changes single-phase, 115-volt, 60-cycle A C to three-phase, 230-volt, 60-cycle current . . . 4-page brochure from J. H. Holan Corp., 4100 W. 150th St., Dept. T-E-M, Cleveland 11, Ohio., describes operating features of Series 6800 Power Derrick.



profits and service through better management

By JAMES L. MORRISON

THIS CHAPTER concludes a series of eight articles devoted to a brief consideration of that body of concepts known as scientific management. Chapter One opened on a note of urgency and the last chapter concludes on the same note as it warns — "There is no substitute for good management."

WITHIN the past 10 years a tremendous amount of attention has been focused upon the responsibilities of management. The results of World War II clearly indicated that one of the real strengths of a free society is its power to produce. This power, however, is directly dependent upon the quality of the decisions that govern our production. Our present economy, our future progress, and the very safety of our persons are all affected by the ability of management to meet its obligations.

Based upon these observations it is no surprise that management development is now generally recognized as a major function of management. If it does nothing else, present day management has a clear obligation to develop competent managers who can carry the mantle of responsibility in future years.

Although it is frequently treated as such, management development is no fad. Every organization has "development" and it has been going on ever since the first supervisors were named. Each day at almost every job employes observe the results of management and many of them learn from it. If the development is well planned, properly executed and carefully evaluated it can be expected to produce the managers needed to meet future challenges. If, however, the development is not properly handled the business must someday face the consequences. Thus management development is neither new nor short lived. The real question, therefore, does not concern the establishment of development but rather what is necessary to make the development process most effective.

Natural Selection

DURING most of its history American industry has depended almost entirely upon "natural selection" for its managers. This "survival of the strong" approach worked rather well for as long as "laissez faire" was the dominant political and economic philosophy.

Times change, however. Our society is growing more complex. Regulation and restraint have become the order of the day. Employes now expect and will seek leadership from management. Men capable of managing yesterday or even today may not be qualified under the changed conditions that are certain to prevail tomorrow. The very practice of management is rapidly taking on professional characteristics.

These, in addition to other factors, clearly indicate that natural selection can no longer be depended upon to produce competent managerial talent.

Development Fundamentals

MANAGEMENT development is at least 95 per cent self development. Even the most complete program will fail unless the student's attitude is conducive

to development. He must be willing to recognize and admit his weaknesses. He must also have a sincere desire to improve evidenced by a readiness to devote the time and energy required for development.

Management development must take place under a favorable climate. There must be sincerity of purpose at all times. The most successful programs place great emphasis upon the day-to-day working relationship between the supervisor and the supervised. The program will be seriously impaired unless all supervisors participate with a conscientious spirit of accomplishment. Management development is an opportunity and should be so regarded.

The development program must be continuous. "One shot" efforts cannot be expected to produce lasting results. They can, in fact, be harmful.

The program must be carefully planned to adhere to agreed upon standards. Many companies are discovering that development tools such as committee work,

THE individual must be guided as he applies his training and knowledge in day-to-day affairs.

job rotation, and university courses have been used as ends in themselves rather than as means to an end. Management development is nothing more than an educational process designed to produce individuals of genuine management ability. The process consists of three fundamental parts:

(1) *Selection.* The company must determine whether or not a man has real management ability and, most important, the degree to which he possesses it.

(2) *Training.* The individual must be educated in such areas as are necessary to provide him with a storehouse of knowledge about scientific management.

(3) *Supervision.* The individual must be guided as he applies his training and knowledge in day-to-day affairs.

Objectives of Development

IT IS impossible to determine the success of any undertaking unless the objectives are known. Many critics of current management development claim that the process defies evaluation. Development, they say, is nothing more than calculated guesswork. This, they argue, is insufficient foundation upon which to commit the futures of bright young men and the expenditure of millions of dollars.

These claims are not without validity. Many development programs have been started with little or no thought given to the objectives of the training. Such an approach is obviously incapable of evaluation.

Management will be wasting its time and money in trying to develop future managers unless objectives are well conceived and clearly defined. The following typical objectives not only lend themselves to evaluation but will also be helpful in guiding the over-all program:

(1) To improve performance on the present job.

(2) To make certain that management skills are kept modern.

(3) To provide individual opportunity for employes to gain greater management skills.

(4) To provide a climate which will encourage managers to develop themselves.

(5) To provide a reservoir of trained and experienced men, whose potentialities are known, to fill higher vacancies as they occur.

Development Plan

THE PLAN for management development must be something more than a few random training or educational devices. It must be a comprehensive program specifically tailored to fit the organization. In addition, the plans must be sufficiently flexible to fit each individual to be developed. Many plans fail because they do not recognize these essential characteristics.

With unlimited funds, personnel, and time most any company could likely devise a development plan that would eventually produce competent managerial talent. The majority of companies, however, have limited funds, personnel must be assigned to other duties, and time is short. Accordingly it is particularly important that every development effort serve as many purposes as possible and that mistakes be avoided.

An affirmative answer to the following indicates a program well on its way to success:

(1) Does the plan provide equal opportunity for development for all qualified employes?

(2) Does the plan provide standards which are fairly applied in screening employes for advancement?

(3) Does the plan motivate the employe to develop himself by letting him see accomplishment at intermediate stages?

(4) Does the plan fit into day-to-day operations? It should help rather than hinder work processes.

(5) Is the plan inexpensive to operate?

(6) Is the plan reasonably simple to operate? Elaborate forms or fancy administrative techniques are not necessary.

(7) Does the plan concentrate on helping the employe do a better job where he is? Promotion should be an incidental benefit of his improvement.

(8) Will the plan produce a reservoir of competent, flexible managers for the future?

Organizational Planning

IT IS unfortunate that many companies have jumped on the management development train without first determining where the train is going. Sound organizational planning is essential if management development is to bear fruit. How, otherwise, can managers be developed for the future needs of the company un-

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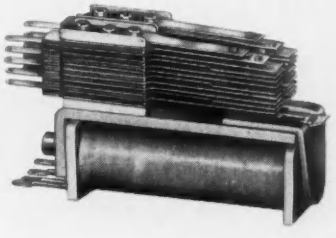

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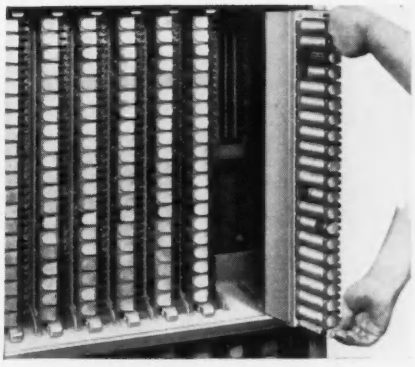

2. Jack-In Flexibility

You can jack-in lines, links, and selectors with the flexible Leich Dial System. This eliminates the need for factory installers, soldering, and wiring.

If trouble should develop in a relay-switch or a relay bar, it's no great worry. A spare part can be jacked-in and the part in trouble returned to the shop for expert servicing.

3. Everything Is Accessible

The Leich Dial System has no back-to-back arrangements. You don't have to spend hours removing one part to get at another.

All the parts are arranged so that each is visible and accessible. For example, note the relay bar above. It can be slid out from its jack and in a minute or two the cover opened up to expose the relays and the wiring.

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less those needs are known? How can men be prepared to fill specific positions unless the company knows the specifications of those positions?

Organizational planning will also serve a number of purposes in addition to management development. Most companies prepare the following information for inclusion in an organizational manual:

(1) *Company Objectives.* Statements setting forth company goals in terms of customers, employes, and owners.

(2) *Company Policies.* Statements of major policies designed to implement the objectives.

(3) *Organization Principles.* Statements to be used in guiding management in planning and changing the organization. The following principles are examples: (A) Each function of the company shall be assigned to a specific person or unit; (B) line functions should be separated, whenever possible, from staff functions; (C) authority shall be delegated as far down the line as possible, etc.

(4) *Organization Titles.* Statements to be used in guiding management in selecting titles which are meaningful, descriptive and uniform.

(5) *Common Responsibilities.* Statements setting forth those responsibilities which are common to all management positions.

(6) *Organization Charts.* Charts setting forth organizational structure for the present and for the forseeable future.

(7) *Position Guides.* Statements describing the principle functions and responsibilities of all management positions.

Ideally, organizational planning should be completed before embarking upon a program for management development. The two can, however, be directed simultaneously with the desirable result that the organizational planning can be used as a valuable development tool.

Selection

EVERY individual is born with some degree of leadership ability. Not every man, however, can become a manager. Unless selections for supervisory positions are zealously controlled the company will soon find itself confronted with a serious problem. If unqualified men are promoted to supervision, and if the company follows a policy of promotion from within whenever possible, then every subsequent selection is also made from unqualified material.

It will serve no useful purpose to train men who are not qualified to become managers. The problem can be avoided if the company will develop and adhere to a sound and thorough employe and supervisor selection procedure.

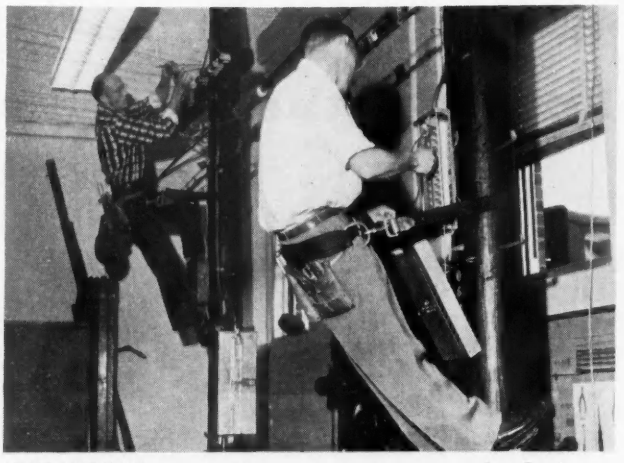
A management development program can be no better than the potential of the men participating in the program. The selection procedure should be designed to identify men with real leadership ability and, most important of all, the degree of that ability.

The company must also have a well planned promotion program. It will serve no useful purpose to develop competent managers unless adequate machinery is available to see that those managers someday occupy the positions that will best utilize their talents. In addition, men committed to a development program will expect promotions based upon merit. If promotions seem to be a hit-and-miss proposition the men are not likely to devote their full energies to self development.

A well planned promotion program should advance men to positions they are qualified to fill and it should also prevent unqualified men from advancing to jobs they cannot control. Incompetent managers are harmful to the company, demoralizing to employes, and unhappy with themselves.

Development Tools

WHEN THE company has an organizational plan, a sound selection procedure and a well planned promotion program it can be assured that its management development efforts are on a firm foundation.



THE GROUP approach concentrates upon developing a team of men capable of working together successfully. The student-centered approach concentrates on developing each individual to the limit of ability.

Without these essential stepping stones the chances for failure are high.

All too frequently the tools of development are used as ends in themselves rather than as means to an end. The literature on management development is voluminous. Much of it abounds with gimmicks and package plans designed to be short cuts for developing executives. There are no short cuts and much of this material is worthless.

There seem to be two basic approaches to management development. One is the individual or student centered approach and the other is referred to as group or multiple management.

The student centered approach concentrates upon developing each individual to the limit of his ability. His strengths and weaknesses are determined and an individual plan is prepared for and with him. The plan will use such development tools as will best help to correct his weaknesses and utilize his strong points.

The group approach concentrates upon developing a team of men capable of working together successfully. The most common training vehicle is the junior board of directors.

Each approach has merit. The former is the most popular. Each company must determine for itself the plan that will best suit its purposes. A plan that works well for one company may fail in another. Once

a sound plan has been developed there are dozens of development tools that can be used.

Evaluation

MANAGEMENT development can be evaluated. In fact it must be capable of evaluation. No company can afford to commit men or money to such a project unless its accomplishments can be reviewed periodically.

First of all the plan can be checked against the requirements set forth earlier in this chapter. If those requirements are being met the company will have reasonable assurance that the plan is achieving results. Those results cannot, however, be achieved overnight. For most companies the establishment of a reservoir of competent and experienced managers will take years.

As the program goes along the company should notice an improvement in human relations. There should be a better understanding of the job and greater respect for fellow employes. Job performance should improve. Employe turnover should reduce and the company can expect to attract more qualified young people. The development program ought to help the company do a better job in the future in appraising employe performance. It should reveal weaknesses within the organization and, as the acid test, eventually help to reduce costs and improve profits.

Conclusion

THIS CHAPTER concludes a series of eight articles devoted to a brief consideration of that body of concepts known as scientific management. If the material contributes, in whole or in part, to a better understanding and greater appreciation of the need for steadily improving the quality of management the author's purpose will have been served.

The first chapter opened on a note of urgency. This last chapter concludes on the same note. There is no substitute for good management. It is the key to the solution of business problems. There is no alternative this side of the bankruptcy courts.

American industry must exert every effort to improve present day management as well as safeguard the future by developing leaders qualified to meet tomorrow's needs. If management fails to do this there will be no free and private enterprise for future generations to enjoy. — *The End.*

EDITOR'S NOTE

The TE&M editorial staff hopes that the articles on "*Profits and Service Through Better Management*" by Jim Morrison, have provided you with ideas you have put to work in your own company.

Would you like for us to reprint the articles as one complete book? The book would contain the following chapters: I — Management Functions; II — Developing Company Organization and Policies; III — Employe and Management Selection; IV — Planning and Budgeting; V — Directing Employe Effort; VI — Coordinating and Standardizing; VII — Controlling and Evaluating; VIII — Management Development.

If you want the articles reprinted drop us a line and tell us how many copies you will require. If enough readers are interested, we'll see what can be done.

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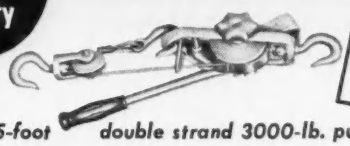

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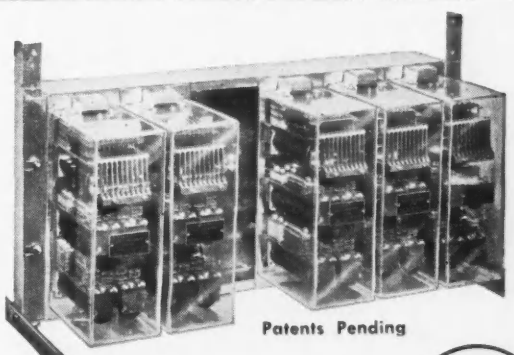

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A TELEPHONE ENGINEER OPERATING MANUAL

RURAL DISTRIBUTION WIRE

By JOHN S. REED

PART TWO of TE&M's Operating Manual on "Rural Distribution Wire" discusses: — (1) Pole sizes, span lengths and sags; (2) stringing procedures; and (3) attaching support arm to poles and crossarms. Part One of this manual appeared in the June 15 issue.

Pole Sizes, Span Lengths, and Sags for Rural Distribution Wire

LIKE OTHER wire facilities, rural distribution wire is subjected to storm loading which produces a transverse force upon poles supporting the distribution wire. In the heavy loading district the maximum loading is considered to occur when wires are coated with ½-inch ice and is subjected to a 4-pound wind force. For the medium loading district, the maximum loading is ¼-inch ice and 4-pound wind and for the light loading district, 12-pound wind and no ice. A comparison of projected areas of wires exposed to wind pressure under the three maximum loading conditions determines the wire equivalents of rural distribution wire (6-pair size) to be the following:

In heavy loading district — 1½ 104-mil copper wires.

In medium loading district — 2 104-mil copper wires.

In light loading district — 6 104-mil copper wires.

When the rural distribution wire is the only facility installed, Class 10 poles are considered adequate to support up to 450-foot spans in all loading districts. (Some companies employ Class 9 poles in preference to Class 10, as being easier and safer to work on.) At sharp angle corners and at dead ends heavier poles in this class or poles one class larger should be used.

In placing the distribution wire on poles with other existing wire facilities, the corresponding wire equivalents will determine if the poles are adequate to carry the additional load. Where more than one distribution wire is installed, these wire equivalents are multiplied by the number of these facilities to obtain the loading figure.

For 11-pair and 16-pair rural distribution wire, the increase in loading due to the greater overall diameter of these wires is slight, corresponding to about ½ additional 104-mill copper wire for heavy loading district and about 2 additional 104 mil conductors for the light loading zone. The same sizes of poles specified for the 6-pair distribution wire may be employed for these larger sizes of distribution wire.

Average span lengths for the various sizes of the rural distribution wire in the three loading districts are indicated by tables of distribution wire sags which may be obtained from *managing editor of TE&M*. The sags in these tables are minimum and it is desirable to increase these sags as much as the minimum ground clearances will permit since this will decrease pole and guy loads and reduce maintenance of the distribution wire to a minimum. Ground clearance at the time of installation should be the minimum required plus one foot.

For guying 6-pair distribution wire leads, a 2,200-lb. strand guy is sufficient where the lead to height ratio of the guy is one or greater. For smaller lead to height ratios, a 6,000-lb. strand guy is necessary. This requirement also applies to corner guying where the pull is greater than 30 feet. Distribution wire with 11 or 16 pairs (19 gauge conductors) should be guyed with 6,000-lb. strand under those conditions. Corners with pull less than 30 feet are adequately supported with 2,200-lb. strand guy, and if the pull does not exceed 5 feet, the corner pole does not require guying. It is not advisable to place guys with a lead to height ratio of less than one-third.

When rural distribution wire is installed in a lead with existing wire or cable facilities, another guy need not be placed unless the existing guy is inadequate to hold the extra load (equivalent from three to five extra 104 mil copper wires) depending on the stringing tension.

FIG. EIGHT: — General Machine Products Company G1023 rural distribution wire block. This is a quick detachable cable block designed for use in stringing long spans of rural distribution wire.

Stringing Procedures for Rural Distribution Wire

THE METHOD of stringing the rural distribution wire is essentially the same as that employed for open wire. It is desirable, whenever this can be done, to pay out the wire from a moving reel.

If obstructions along the lead interfere with the paying out of the distribution wire from a moving reel,

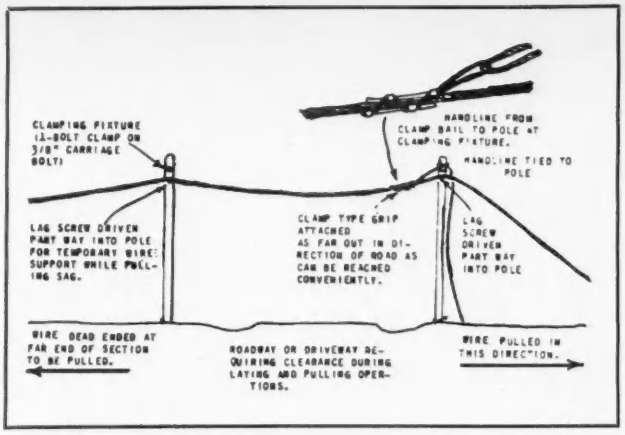

CLAMPING FIXTURE (1-BOLT CLAMP ON 3/8" CARRIAGE BOLT)
HANDLINE FROM CLAMP RAIL TO POLE AT CLAMPING FIXTURE.
HANDLINE TIED TO POLE
LAG SCREW DRIVEN PART WAY INTO POLE FOR TEMPORARY WIRE SUPPORT WHILE PULLING SAG.
CLAMP TYPE GRIP ATTACHED AS FAR OUT IN DIRECTION OF ROAD AS CAN BE REACHED CONVENIENTLY.
LAG SCREW DRIVEN PART WAY INTO POLE
WIRE DEAD ENDED AT FAR END OF SECTION TO BE PULLED.
ROADWAY OR DRIVEWAY REQUIRING CLEARANCE DURING LAYING AND PULLING OPERATIONS.
WIRE PULLED IN THIS DIRECTION.

FIG. NINE: — Method of temporarily supporting rural distribution wire to obtain clearance over road during laying and pulling operation.

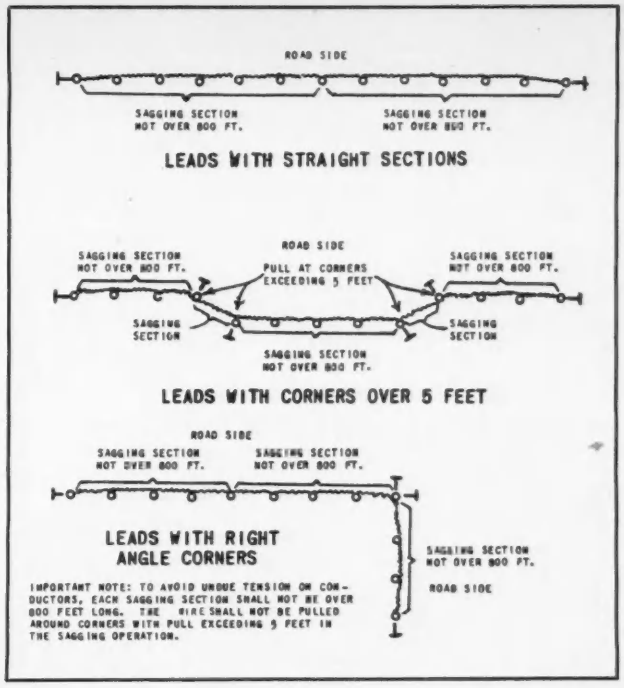

ROAD SIDE
SAGGING SECTION NOT OVER 800 FT.
SAGGING SECTION NOT OVER 800 FT.
LEADS WITH STRAIGHT SECTIONS
SAGGING SECTION NOT OVER 800 FT.
ROAD SIDE
PULL AT CORNERS EXCEEDING 5 FEET
SAGGING SECTION NOT OVER 800 FT.
SAGGING SECTION
SAGGING SECTION
SAGGING SECTION NOT OVER 800 FT.
LEADS WITH CORNERS OVER 5 FEET
ROAD SIDE
SAGGING SECTION NOT OVER 800 FT.
SAGGING SECTION NOT OVER 800 FT.
LEADS WITH RIGHT ANGLE CORNERS
SAGGING SECTION NOT OVER 800 FT.
ROAD SIDE
IMPORTANT NOTE: TO AVOID UNDUE TENSION ON CONDUCTORS, EACH SAGGING SECTION SHALL NOT BE OVER 800 FEET LONG. THE WIRE SHALL NOT BE PULLED AROUND CORNERS WITH PULL EXCEEDING 5 FEET IN THE SAGGING OPERATION.

FIG. 10: — Sagging sections for rural distribution wire.

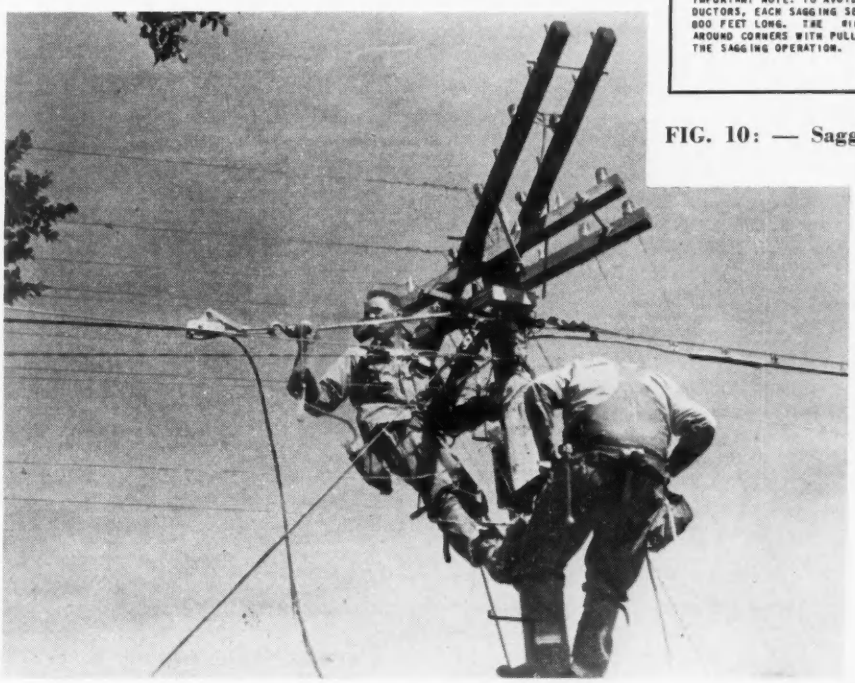


FIG. 11: — Use of chain hoist and slack block grip for tensioning rural distribution wire.

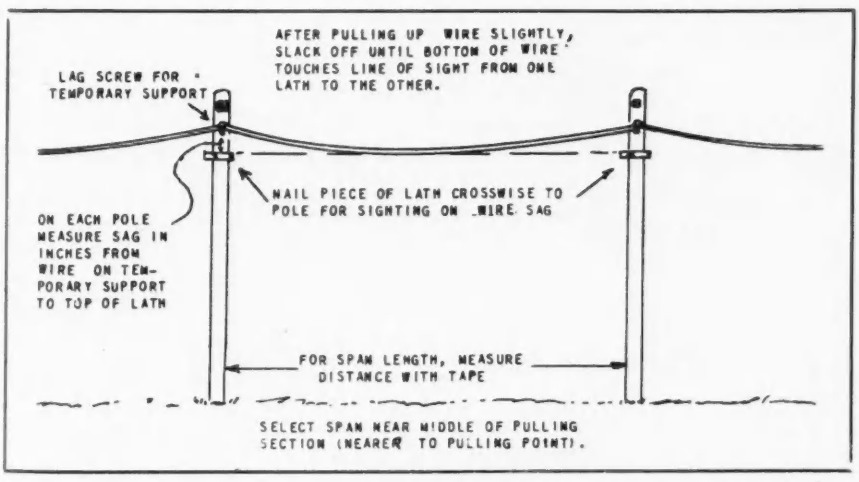

AFTER PULLING UP WIRE SLIGHTLY, SLACK OFF UNTIL BOTTOM OF WIRE TOUCHES LINE OF SIGHT FROM ONE LATH TO THE OTHER.
LAG SCREW FOR TEMPORARY SUPPORT
NAIL PIECE OF LATH CROSSWISE TO POLE FOR SIGHTING ON WIRE SAG
ON EACH POLE MEASURE SAG IN INCHES FROM WIRE ON TEMPORARY SUPPORT TO TOP OF LATH
FOR SPAN LENGTH, MEASURE DISTANCE WITH TAPE
SELECT SPAN NEAR MIDDLE OF PULLING SECTION (NEARER TO PULLING POINT).

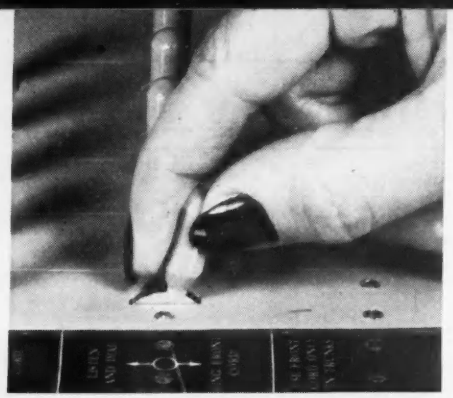
FIG. 12: — Sagging rural distribution wire by sighting method.

the wire may be pulled out along the lead from the reel in a stationary position. In some instances, when only part of the lead is obstructed, it may be possible to spot the truck between the obstructed and unobstructed sections, pull out the distribution wire along the obstructed portion, and then start the truck and pay out the wire along the clear section. This procedure will do away with the necessity for cutting and resplicing the distribution wire at this point.

Care should be taken not to allow the conductors to be damaged by jagged stones, barbed wire, or other sharp objects, particularly when the wire is being pulled out from a stationary reel.

As the distribution wire is laid out along the lead, it may be raised onto lag screws or brackets on each pole using a handline or wire raising tool. If lag screws and S-reinforcing straps are installed on the poles, and there is no interference from a crossarm or other objects on the pole, a lag screw may be driven for the strap part way and the wire placed thereon. If "J" type brackets are employed, the distribution wire is laid inside the curved end of the brackets, and lag screws are not required for supporting the distribution wire.

Where 1-bolt clamps and carriage bolt are employed on the poles, a lag screw may be installed about 6 inches below the carriage bolt and the wire placed thereon. (*Turn to page* 46)



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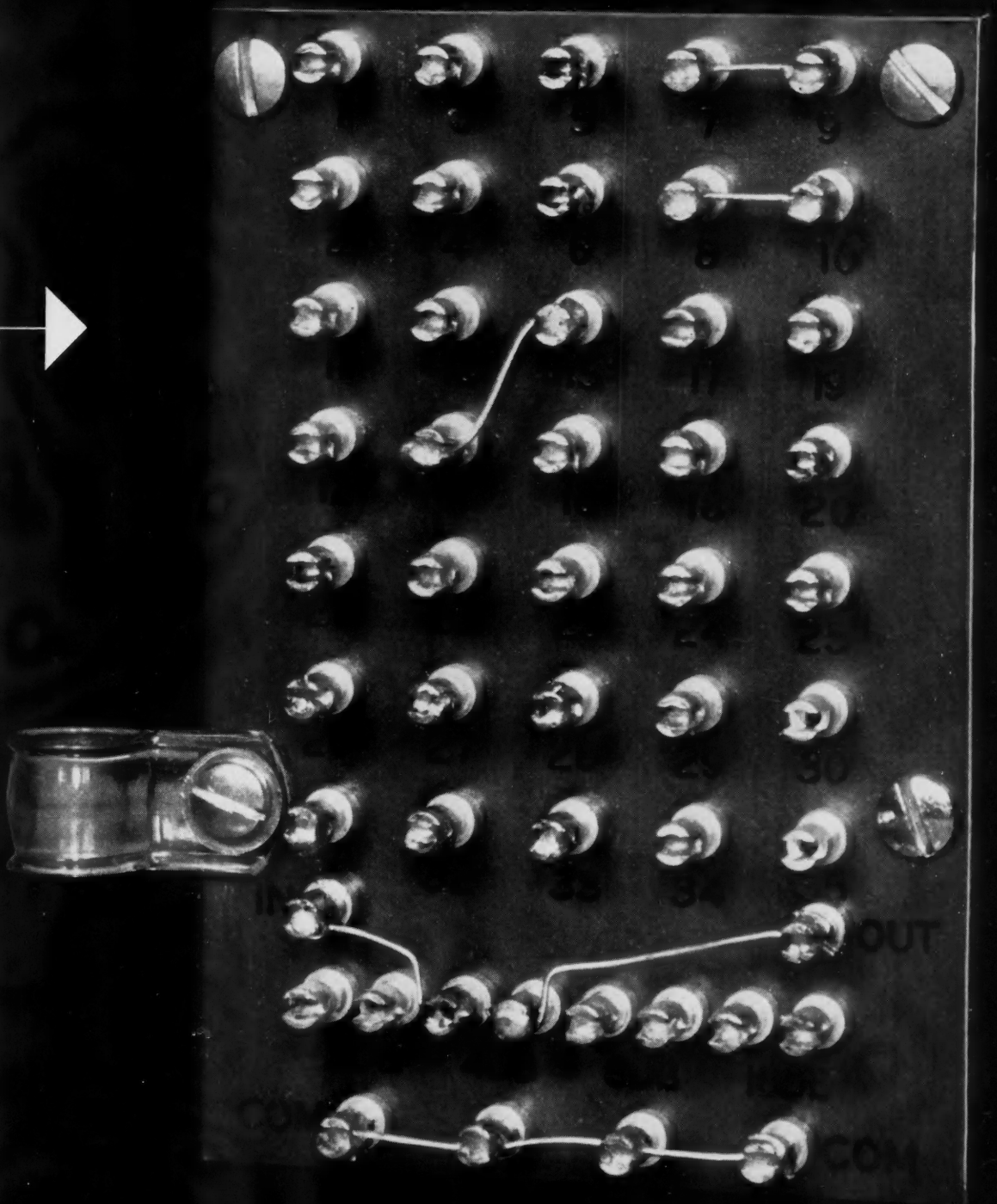

Conversion from ringdown to dial operation is simply a matter of changing wire strapping on the two terminal boards.

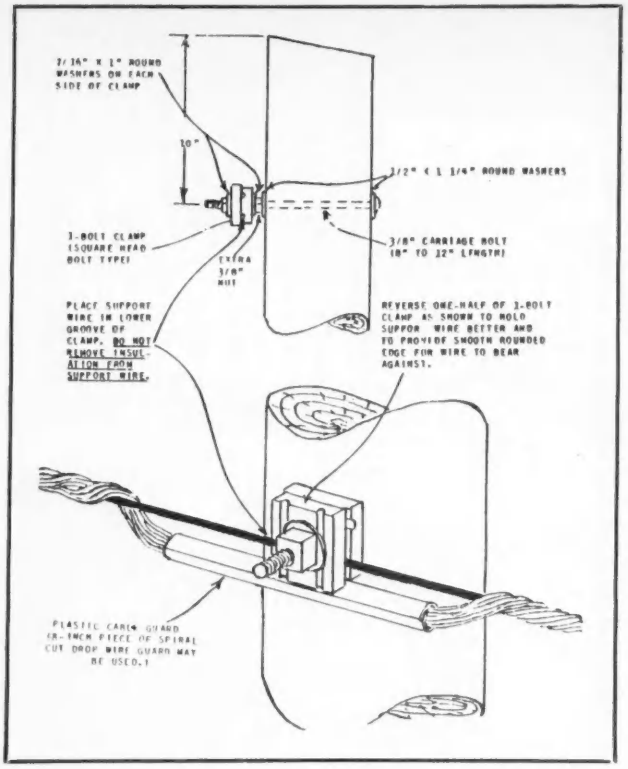
3/16" X 1" ROUND WASHERS ON EACH SIDE OF CLAMP
10"
1/2" X 1 1/4" ROUND WASHERS
1-BOLT CLAMP (SQUARE HEAD BOLT TYPE)
EXTRA 3/8" NUT
3/8" CARRIAGE BOLT (8" TO 12" LENGTH)
PLACE SUPPORT WIRE IN LOWER GROOVE OF CLAMP. DO NOT REMOVE INSULATION FROM SUPPORT WIRE.
REVERSE ONE-HALF OF 1-BOLT CLAMP AS SHOWN TO HOLD SUPPOR WIRE BETTER AND TO PROVIDE SMOOTH ROUNDED EDGE FOR WIRE TO BEAR AGAINST.
PLASTIC CABLE GUARD (8-INCH PIECE OF SPIRAL CUT DROP WIRE GUARD MAY BE USED.)

FIG. 13: — Method of attaching rural distribution wire to small diameter line pole using 1-bolt clamp on carriage bolt.

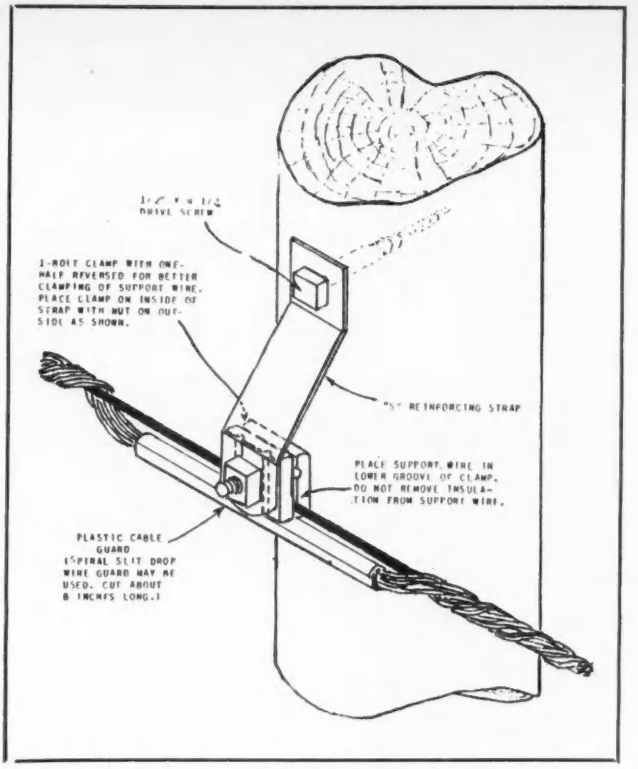
DRIVE SCREW
1-BOLT CLAMP WITH ONE-HALF REVERSED FOR BETTER CLAMPING OF SUPPORT WIRE. PLACE CLAMP ON INSIDE OF STRAP WITH NUT ON OUTSIDE AS SHOWN.
"S" REINFORCING STRAP
PLACE SUPPORT WIRE IN LOWER GROOVE OF CLAMP. DO NOT REMOVE INSULATION FROM SUPPORT WIRE.
PLASTIC CABLE GUARD (SPIRAL SLIT DROP WIRE GUARD MAY BE USED. CUT ABOUT 8 INCHES LONG.)

FIG. 14: — Use of reinforcing strap, drive screw, and 1-bolt clamp to support rural distribution wire on large diameter line poles.

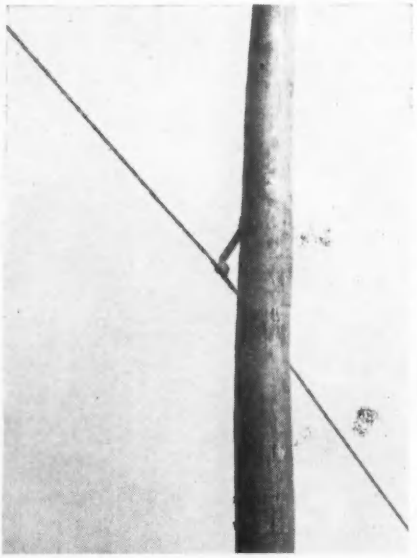

FIG. 15: — Illustrating the reinforcing strap method of supporting rural distribution wire on power pole on joint construction.

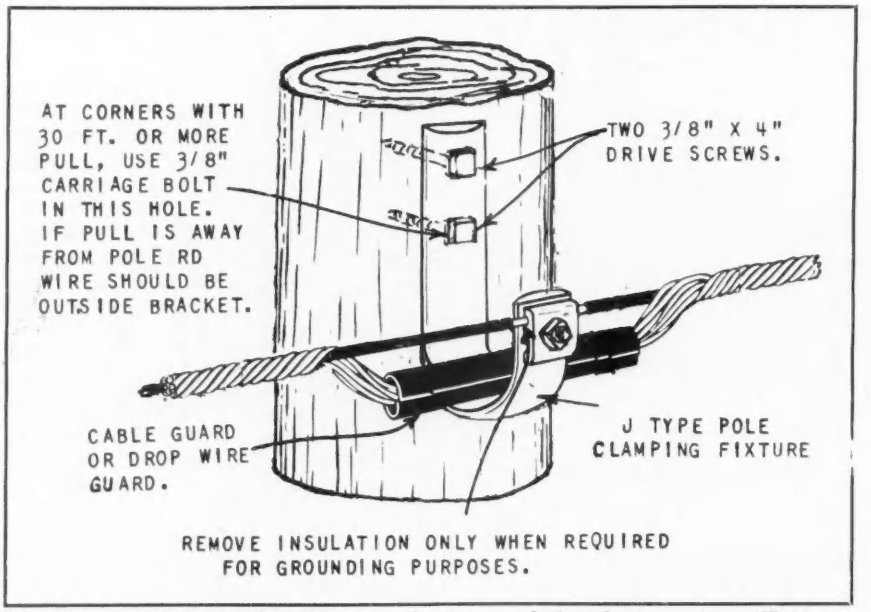
AT CORNERS WITH 30 FT. OR MORE PULL, USE 3/8" CARRIAGE BOLT IN THIS HOLE. IF PULL IS AWAY FROM POLE RD WIRE SHOULD BE OUTSIDE BRACKET.
TWO 3/8" X 4" DRIVE SCREWS.
CABLE GUARD OR DROP WIRE GUARD.
J TYPE POLE CLAMPING FIXTURE
REMOVE INSULATION ONLY WHEN REQUIRED FOR GROUNDING PURPOSES.

FIG. 17: — "J" type bracket on pole for rural distribution wire. (Hubbard or Joslyn).

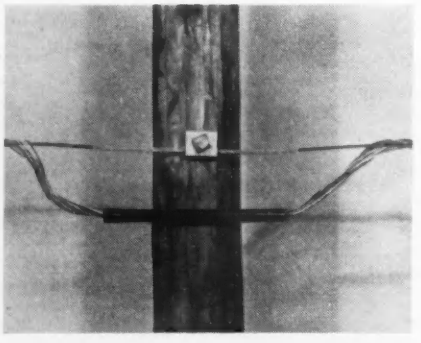

FIG. 16 (Left): — Rural distribution wire tangent support with Preformed splice and plastic line guard. This arrangement is used for protecting the support wire from damage at the clamping point.

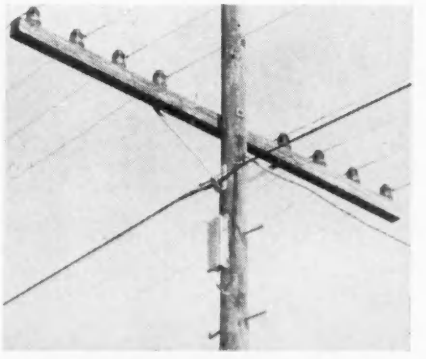

FIG. 18 (Right): — Practical application of "J" type bracket in distribution wire lead.

Instead of lag screws, rural distribution wire cable blocks of the quick detachable type (*Figure* 8) may be employed. These blocks are useful where long spans of the distribution wire are being placed or where it is desired to place the wire on poles with existing cable. The blocks can be snapped in place over cable suspension bolts.

At road crossings and over driveways, the wire is pulled up to partial sag and snubbed temporarily with a grip type (drop cable) clamp, as shown in *Figure* 9.

Sagging Rural Distribution Wire

AFTER laying up the RD wire on temporary supports on the poles, the wire is pulled up by sections, as illustrated in *Figure* 10. In straight portions of the lead, the sagging sections should not exceed 800 feet in length. The distribution wire should not be pulled around corners having more than five feet pull. The sagging sections should begin and terminate at the corner poles, as shown in the illustration.

Starting at the end of the lead, each section is sagged progressively to the other end, employing a chain hoist (*Figure* 11) or 3-sheave blocks with a slack block grip to pull up the wire in this manner. The chain hoist or blocks are attached to the pole or crossarm at the approximate location where the wire is to be fastened. If necessary, a temporary guy is placed to support the pole against the pull.

The wire is pulled up by hand as far as it will go and snubbed in place. The conductors are separated to expose the support wire and the insulation is removed from the support wire to place the slack block grip. The chain hoist is operated to pull the rural distribution wire to the desired sag by sighting as shown in *Figure* 12. The rural distribution wire is observed during the operation to make sure that it does not

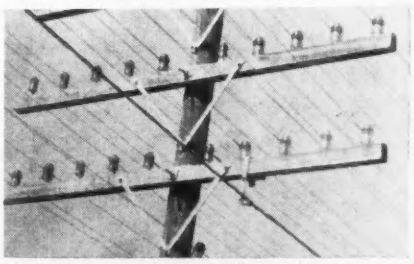

FIG. 21: — Practical application of 1-bolt transposition bracket for attaching rural distribution wire to crossarm.

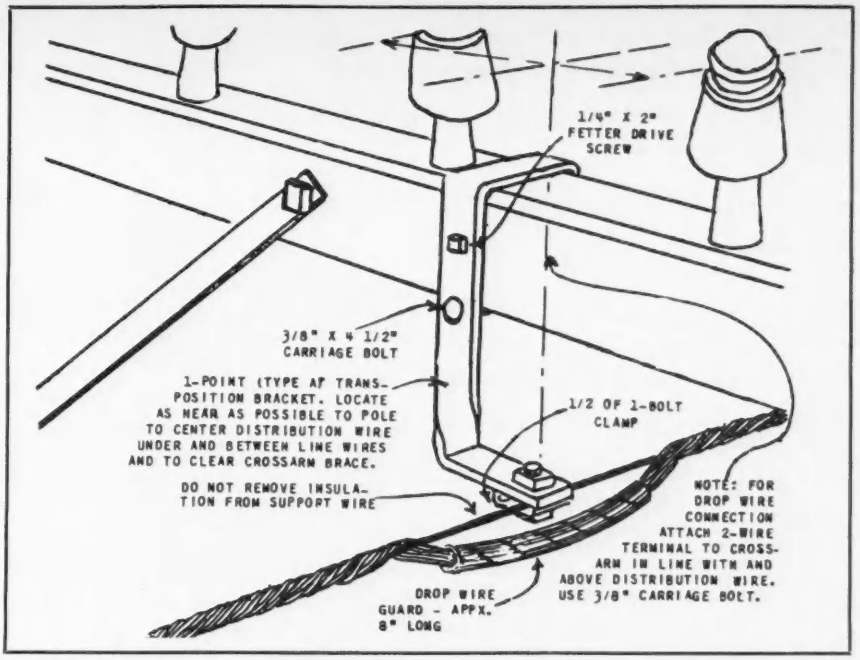
1/4" X 2" FETTER DRIVE SCREW
3/8" X 4 1/2" CARRIAGE BOLT
1-POINT (TYPE AF TRANS-POSITION BRACKET. LOCATE AS NEAR AS POSSIBLE TO POLE TO CENTER DISTRIBUTION WIRE UNDER AND BETWEEN LINE WIRES AND TO CLEAR CROSSARM BRACE.
1/2 OF 1-BOLT CLAMP
DO NOT REMOVE INSULATION FROM SUPPORT WIRE
NOTE: FOR DROP WIRE CONNECTION ATTACH 2-WIRE TERMINAL TO CROSSARM IN LINE WITH AND ABOVE DISTRIBUTION WIRE. USE 3/8" CARRIAGE BOLT.
DROP WIRE GUARD - APPX. 8" LONG

FIG. 19: — Method of supporting rural distribution wire on crossarm using 1-point transposition bracket and one half of 1-bolt clamp.

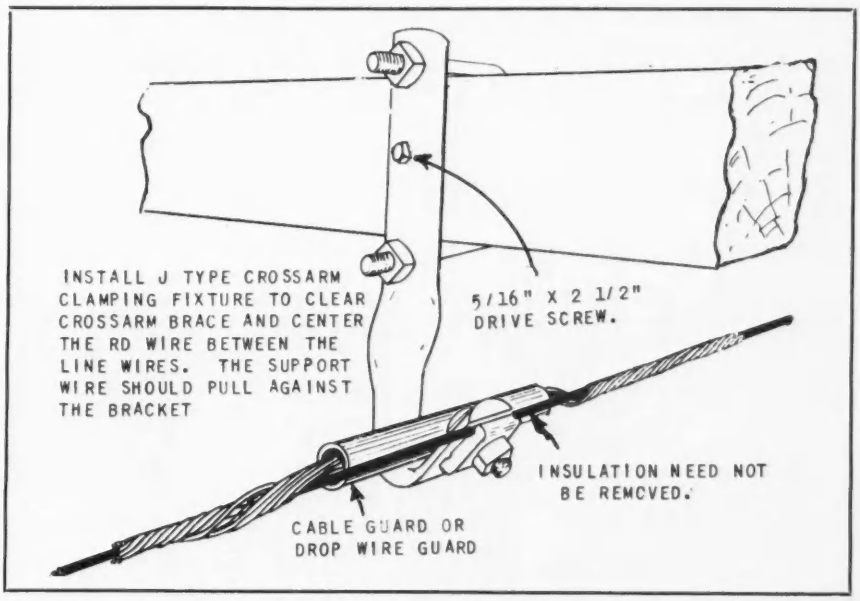
INSTALL J TYPE CROSSARM CLAMPING FIXTURE TO CLEAR CROSSARM BRACE AND CENTER THE RD WIRE BETWEEN THE LINE WIRES. THE SUPPORT WIRE SHOULD PULL AGAINST THE BRACKET
5/16" X 2 1/2" DRIVE SCREW.
INSULATION NEED NOT BE REMOVED.
CABLE GUARD OR DROP WIRE GUARD

FIG. 20: — Use of "J" type bracket fixture (Hubbard or Joslyn) for attaching rural distribution wire to crossarm.

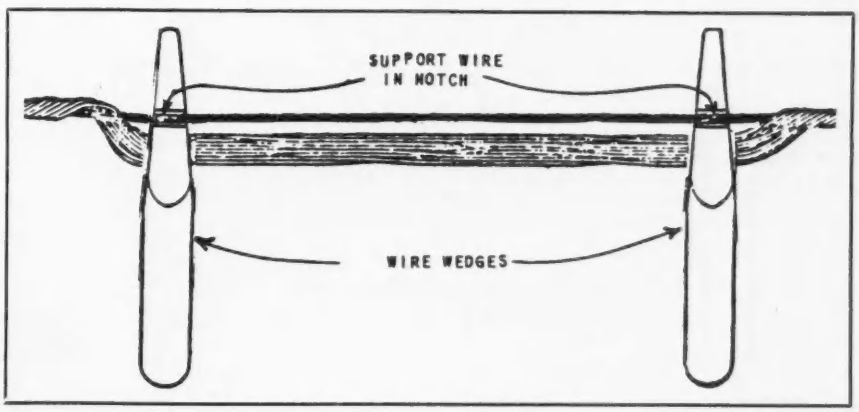

FIG. 22: — Method of applying special wood wedges for separating conductors from the support wire of rural distribution wire.

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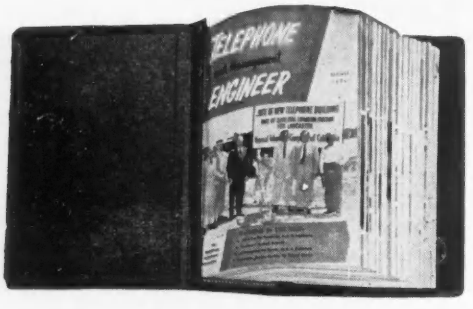

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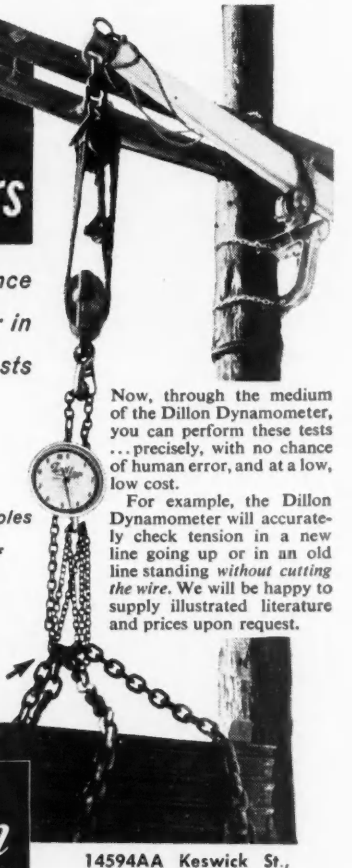

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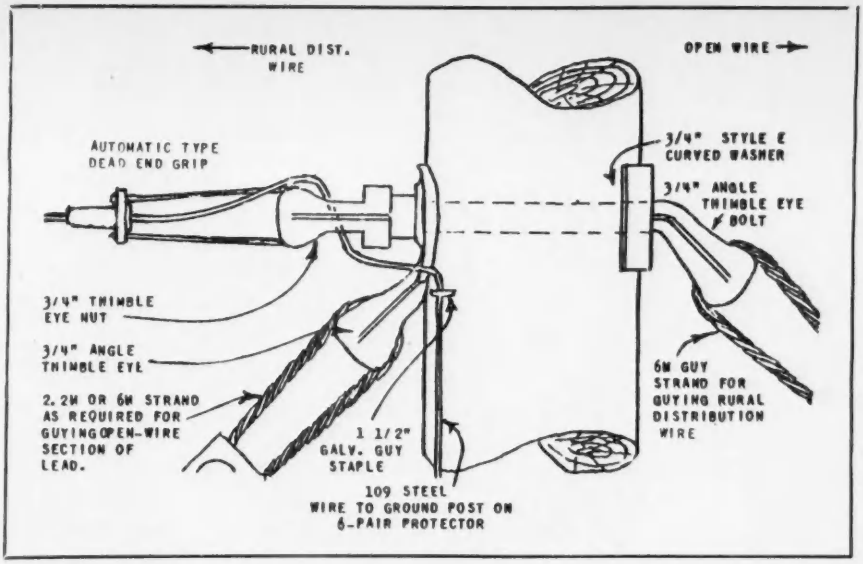
RURAL DIST. WIRE
OPEN WIRE
AUTOMATIC TYPE DEAD END GRIP
3/4" STYLE E CURVED WASHER
3/4" ANGLE THIMBLE EYE BOLT
3/4" THIMBLE EYE NUT
3/4" ANGLE THIMBLE EYE
2, 2W OR 6W STRAND AS REQUIRED FOR GUYING OPEN-WIRE SECTION OF LEAD.
1 1/2" GALV. GUY STAPLE
6W GUY STRAND FOR GUYING RURAL DISTRIBUTION WIRE
109 STEEL WIRE TO GROUND POST ON 6-PAIR PROTECTOR

FIG. 23: — Dead ending rural distribution wire at junction with open wire, using automatic type grip (Wirevise).

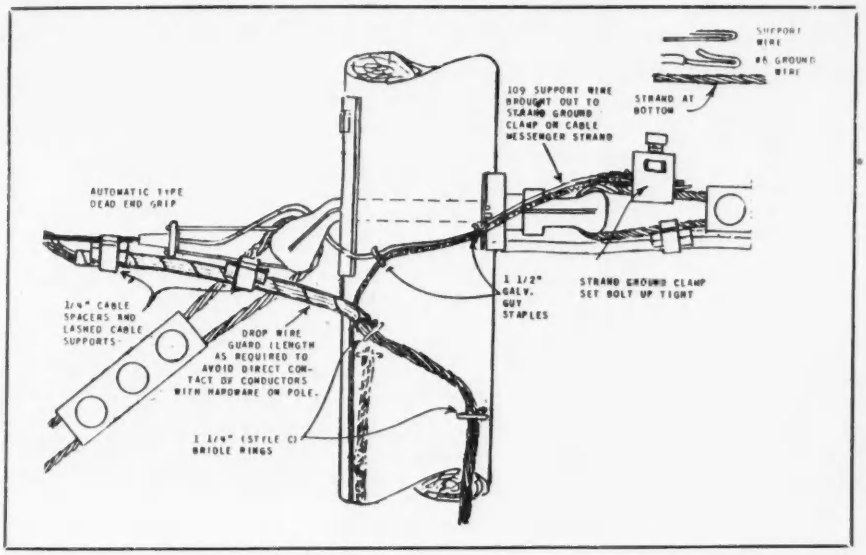
SUPPORT WIRE
#6 GROUND WIRE
109 SUPPORT WIRE BROUGHT OUT TO STRAND GROUND CLAMP OR CABLE MESSENGER STRAND
STRAND AT BOTTOM
AUTOMATIC TYPE DEAD END GRIP
1 1/2" GALV. GUY STAPLES
STRAND GROUND CLAMP SET BOLT UP TIGHT
1/4" CABLE SPACERS AND LASHED CABLE SUPPORTS
DROP WIRE GUARD (LENGTH AS REQUIRED TO AVOID DIRECT CONTACT OF CONDUCTORS WITH HARDWARE ON POLE)
1 1/4" (STYLE C) BRIDLE RINGS

FIG. 24: — Dead ending rural distribution wire on same angle thimble eye bolt with down guy. This method is applicable to existing guy installations.

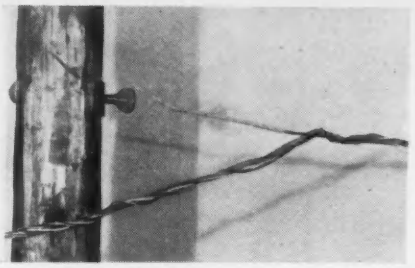

FIG. 25: — Preformed dead end grip applied for dead ending rural distribution wire.

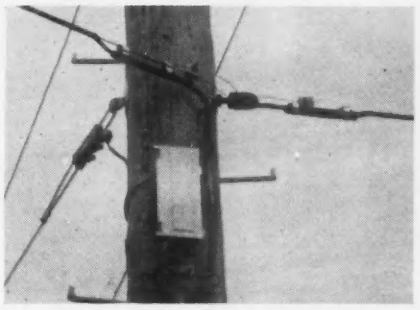

FIG. 26: — Use of 1-bolt clamp at rural distribution wire dead end.

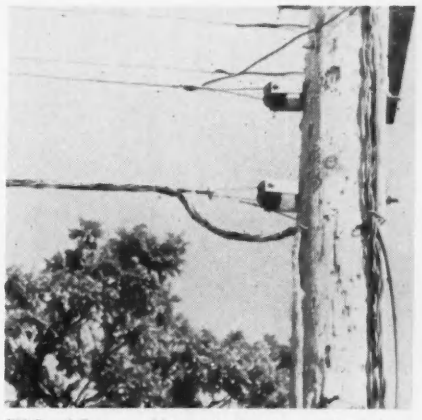

FIG. 27: — Use of dead-end bracket and automatic grip to terminate support wire of rural distribution wire.

seize in the temporary supports. (After the slack block grip is removed, the bared portion of the support wire should be insulated with two layers of vinyl electrical tape.)

The conductors are separated from the support wire and a cable guard is placed around the conductors at each pole using wood wedges to facilitate this operation. The support wire is then attached in the clamping fixture or to the dead end fixture.

The chain hoist (or blocks) and temporary guy (if any) are left in place until the wire sagging operations are completed in the next section and then the equipment is transferred to the section beyond this one.

Figures 13 *to* 18 illustrate various methods of attaching the support wire of rural distribution wire to line poles. Either the "B" type cable guard with straight slit or drop wire guard with spiral slits may be employed to protect the conductors from contact with the clamping fixture.

When the rural distribution wire is to be attached to crossarms in straight sections of the lead, the method is as illustrated in *Figures* 19 *to* 21. In all cases, the lowest crossarm should be used for the support as *Figure* 21 indicates.

The use of wooden wedges as in *Figure* 22 will greatly facilitate the separation of conductors from the support wire for attaching the latter to the clamping fixture. One wedge is inserted by twisting the distribution wire in opposite directions to open up the lay and working the wedge slowly through the opening until the notch engages the support wire. The opening is enlarged by continuing to twist against the lay and the other wooden wedge is then inserted to the notch. The wedges are moved apart while at the same time twisting against the conductor lay until the opening between the conductors and the support wire is large enough to slip the guard into position over the conductors.

Figures 23 *to* 27 illustrate methods of dead ending the rural distribution wire. At corners in the lead where the pull exceeds 30 feet or at right angle corners the procedure is as shown in *Figures* 28 *to* 30.

At corners in a crossarm lead with pull over 30 feet, the support wire is

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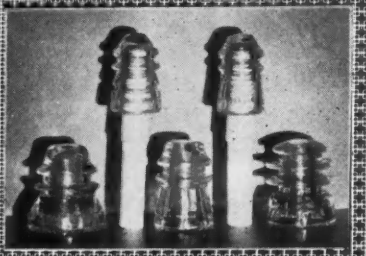

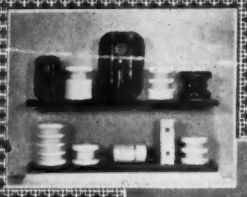

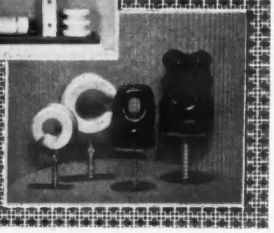

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Careful mixing of the clays provides a uniform quality material highly resistant to breakage — along with accurately controlled "firing" PP knobs and insulators are of the finest quality you can buy.

Pearl Screw Brackets

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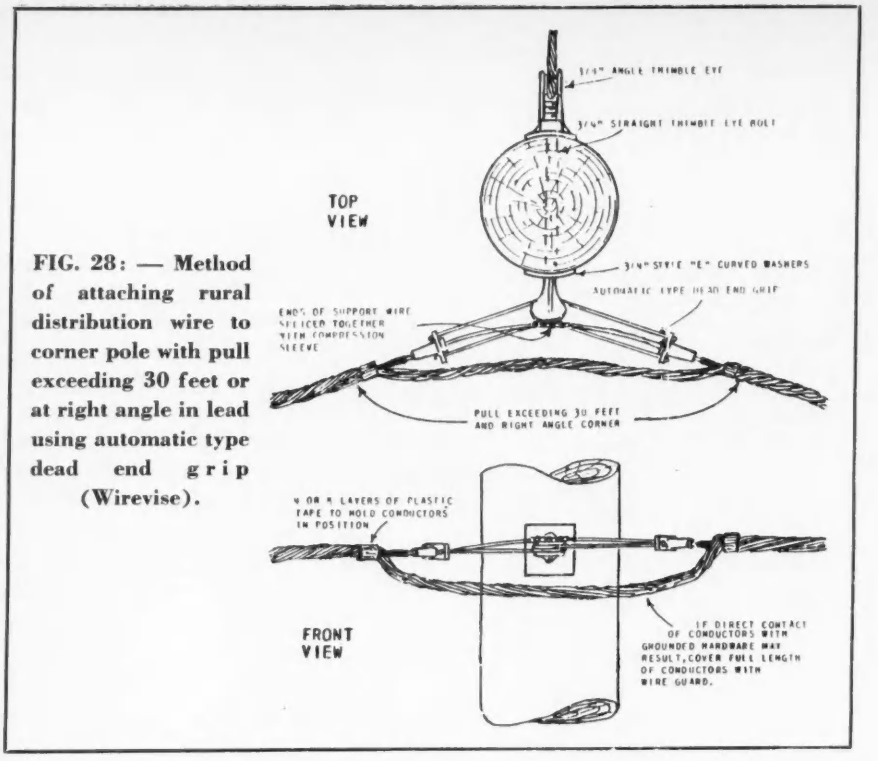

FIG. 28: — Method of attaching rural distribution wire to corner pole with pull exceeding 30 feet or at right angle in lead using automatic type dead end grip (Wirevise).

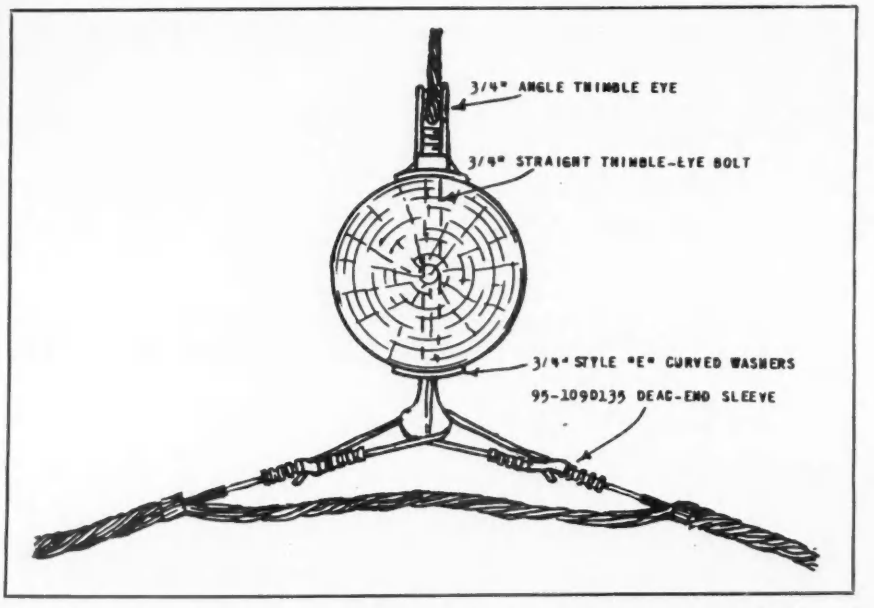

FIG. 29: — Dead end method at corner pole using compression type dead end sleeves.

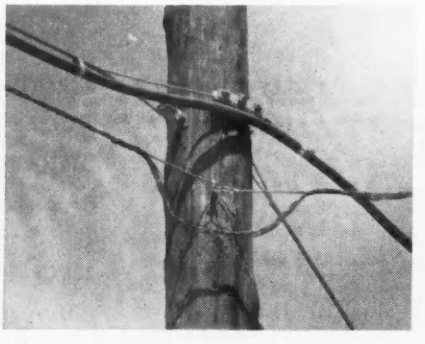

FIG. 30: — Method of supporting rural distribution wire from two directions at corner pole using Preformed dead end grips.

attached to a straight thimble eye bolt in the pole about 4 inches below the crossarm. At dead end points, the support wire is attached directly to the dead end pole.—*To be continued.*

Diamond Jubilee Convention

Plan to Attend USITA'S 60th Anniversary Convention, at Conrad Hilton Hotel, Chicago, October 14, 15, 16.

Pennsylvania Independents Meet

PITA Holds 55th Annual Convention: Ralph B. Scott Elected President

HOLDING their 55th annual convention at The Inn, Buck Hill Falls, Pa., members of the Pennsylvania Independent Telephone Association participated in a two-day meeting that accented the industry's growth and its prospect for the future.

Pennsylvania Association President Henry Y. Smith, president of the Columbia Telephone Co., told the convention "the growing pains we have been suffering for the past 13 years will be with us for many years to come.

"This growing brings pleasure as well as pain," he said, "for it is only human to feel pride in our constantly improving and increasing plant, and to watch the figures on our balance sheet and operating statement go steadily higher. There is some indication that the pains of growing have overbalanced the pleasures for some of the thousand or more of our former Independent companies which went out of existance in the past 15 years, merging into other companies. There were probably many more which changed ownership, but retained the same corporate structure. Much of this could probably have been avoided had the former owners and managers taken certain steps to overcome their difficulties. We might call this process of avoiding or alleviating growing pains — planning for growth."

Describing the growth experience of the Columbia Telephone Co., Mr. Smith stated, "Our experience at Columbia has led us to do a great deal of planning for growth, as well as the planning and carrying out of other management functions, in group meetings."

"Our operating department heads and various technicians meet with top management at regular intervals to discuss and take action on specific matters, and on other subjects that may be introduced by the members of the group," he said. "These staff meetings function in a manner similar to the directors' meetings, and, while some problems are settled at the time, others result in recommendations to the boards. Examples of the latter type are the construction or capital expenditure estimate which is presented annually to the board on a 3-year forecast basis, and the monthly cash requirement estimate which goes to each board meeting through the year.

"The yearly estimate enables the

BOARD OF DIRECTORS' dinner held during Pennsylvania Independent Telephone Association Convention at Buck Hill Falls, Pa. Left to right, seated: A. N. SEWARD, Meadville Tel. Co.; A. J. SORDONI, JR., Commonwealth Tel. Co.; L. R. THURSTON, United Tel. Co. of Pa.; H. Y. SMITH, Columbia Tel. Co.; A. C. HERBERT, executive vice president, Pa. Ind. Tel. Assn.; L. F. SHEPHERD, General Tel. Co. of Pa.; and H. G. PAYNE, Murraysville Tel. Co. Standing: K. B. SCHOTTE, Kittanning Tel. Co.; W. M. GOTTSCHALL, Carbon Tel. Co.; J. K. STOLTZFUS, Conestoga Tel. & Tel. Co.; G. A. RUHL, Buffalo Valley Tel. Co.; R. B. SCOTT, South Penn. Tel. Co.; B. V. COBLER, Rural Tel. Co.; and W. C. MARTIN, Peoples Tel. Corp.

PEOPLES TELEPHONE anticipates

Zeno F. Henninger, President

During the past 10 years, the City of Butler and the counties surrounding it in Western Pennsylvania have enjoyed phenomenal telephone growth. In 1946, The Peoples Telephone Corporation provided service to 14,788 telephones in this area. Today, this company serves over 29,000 telephones through its 20 dial exchanges.

The Peoples Telephone Corporation has endeavored

ON THE FARM

Headquarters Building of The Peoples Telephone Corporation, Butler, Pa. This progressive company has 20 central communications offices. It maintains communications for over 29,000 telephones in Western Pennsylvania.

IN THE FACTORY

IN THE OFFICE

CORPORATION

continued growth in its area

to provide for this unusual growth by proper additions to cable and *pole-line* facilities, along with needed improvement to central-office equipment. Today, the company maintains a high grade of toll service through its use of microwave and carrier circuits.

The Peoples Telephone Corporation serves approximately 22,000 business and residential subscribers, compared to 13,000 customers 10 years ago. As Mr. Zeno F. Henninger, President, puts it: "We are serving the public by trying to provide the type of service they want."

"As our company expands, we install only pressure-creosoted poles,"

says **John R. Henninger,** *Secretary*

Pressure-creosoted poles are playing an important part in the rapid expansion of The Peoples Telephone Corporation. Last year, for example, 1,691 new line poles were added. And all of them are pressure-creosoted.

Mr. John R. Henninger, Secretary, estimates that these new poles will have a life span of 30 to 35 years. Based on past performance records with all utilities, his estimate should turn out to be accurate.

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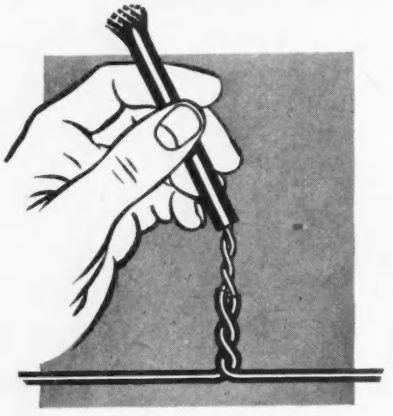

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directors to plan long-term or permanent financing, while the monthly estimate is quite necessary to aid the board in obtaining short-term money in the present tight market conditions. I believe group meetings of this or similar nature, which most of our member companies no doubt use in some form or another, not only are of great aid in helping to solve the numerous difficult problems that beset our industry, but they also help to promote and keep harmonious relations between departments, and aid in the training and broadening of our management personnel."

Mr. Smith emphasized his belief that in the telephone industry, as in any other business in a free economy, "the amount of revenue growth depends to a very large extent upon the kind and amount of advertising and selling we do and the quantity and quality of our merchandising program."

"This business axiom," he said, "has been sold to us in recent years in various ways — speeches, articles, panel discussions, etc., and we are thoroughly imbued with its truth and value."

Pointing out that the selection, training and developing of management technical personnel is the "very essence of planning for a company's health and future stability," Mr. Smith stated, "It has become, and will become more and more necessary to employ, and bring up through the ranks, some college or technical school graduates, to adequately understand, design and maintain the complicated new equipment used in all phases of our business."

WALTER J. BARRETT, New Jersey Bell Telephone Co., was recently elected president of the American Institute of Electrical Engineers, the world's largest engineering society. Mr. Barrett (above) was presented with the President's Pin by M. S. Coover, current President, at the Annual Summer General Meeting in Montreal. The AIEE has over 50,000 members, not including students.

"It is good to see the efforts being made to provide training, developing, and refresher courses for our employes on a national scale," he said. "Our own state association has arranged special conferences from time to time, such as the one in Harrisburg in February on the new changes in plant accounting. We should take full advantage of such valuable aids to better telephone service; and we should send as many of our operating people as possible to these state conventions and meetings . . ."

Executive Vice President A. C. Herbert's annual report showed that during 1956 Pennsylvania Independents gained 48,000 new stations.

"This brings us up to 676,000 Independent telephones in Pennsylvania at the end of 1956," he said. "I have pushed the curves on my charts upward and find that we should hit the million station mark by 1965. If you wonder what that means to you, I can point out that we hit the half million mark early in 1952, so as one factor in estimating your growth, you might double your 1952 stations and plan for that in 1965."

Referring to the investment figures, Mr. Herbert said, "if some of you feel that because you are 100 per cent dial operated, and incidentally, 80 per cent of our telephones are dial, you may be inclined to think that your days of big spending are over and you will be able to take care of future financing out of depreciation moneys and earnings."

"But the charts show that you will double, not 1952's investment, but your investment as of today, by 1965," he said. "That may scare some of you, but you might remember that you have twice doubled your 1945 investment by the end of 1956.

"Besides gaining an estimated 300,000 stations, there are still 65 common battery and 95 magneto exchanges in the state. While we do have 282 dial exchanges, only 40 of them have terminal per station equipment, and only 65 have 2-5 numbering and, for toll settlement purposes, what is considered adequate intercepting. Most of you agree that the spread of direct distance dialing makes these features desireable and you'll be spending money to provide them.

"Then too, the Commission's re-

cent survey showed 49 companies that still have some lines with more than 10 subscribers and 17 have multi-party service in the base rate area. All of you are working toward reducing multi-party lines to a maximum of six or eight, but by the time you have it accomplished, your goal may be only four. You all know of the Bell's program to eliminate four-party in the base-rate area. And while our Independent manufacturers can provide subscriber toll dialing on 10-party lines, we may, from a better service standpoint, also work toward the same goal.

"These are only a few of the things that are going to require large sums of money. We will be replacing many of the older dial switchboards, perhaps with electronic switching. And there is much talk of special services and equipment that we will want to provide our subscribers. Obtaining the money for all of this will continue to be one of management's biggest problems."

Mr. Herbert reported that last year Pennsylvania Independents obtained security certificates for about $13-million of new money, of which there were about $4-million each of bonds, notes, and common stock, and $635,000 of preferred stock.

"All of this was done in what everyone agrees is a tight money market," he said. "This is evident in the interest rates, for, with the exception of five REA loans, the lowest rate obtained by any company was 4¼ per cent and two large bond issues went at 4¾ per cent. Money from these securities issues and that generated within the companies resulted in about $25 million of new plant and net additions of plant of over $17-million, with our total investment now in excess of $164-million. If my predictions are right, you will increase this to over 300 million by 1965."

Mr. Herbert emphasized that, "while the tight money market is still with us, we can't, being public utilities, sit back and wait for lower interest rates before going ahead, no more than we can wait in hopes of lower equipment prices."

"Certainly it is your job to finance and buy equipment to the best advantage of your company," he said, "but we must provide the service our customers require as soon as financing, materials, and manpower will permit. So, many of you will swallow hard on some high interest rates, but will probably go ahead in the hope that it will be recognized in your rate of return. . . ."

Other speakers at the two-day meeting were: George F. Hinkle, former Commissioner of Labor, State of Indiana; Attorney John C. Kelley; Donald C. Power, president of the United States Independent Telephone Association and president of the General Telephone Corp., New York City; and Dr. O. Glenn Saxon, Professor of Economics, Yale University.

Discussing USITA's 60th Anniversary Mr. Power stated that, "The Independent industry has been justly credited with a number of contributions in making the telephone business what it is today."

"It brought service to the grass roots and the villages and the hamlets, which would otherwise have been impossible, because the Bell companies were concentrating on the large cities," he said. "Yet the public demand for service in the great heart of America would have had to be satisfied somehow, and we all know where that would have led if the Independents had not stepped into the breach and furnished telephone service when and where it was needed. It would have led to an epidemic of municipally or other politically operated telephone plants, or worse. We need only look around at the field of electric utility operations, where that very thing happened, to see what problems that would have created."

Stating that the Independents pioneered in service improvements, better equipment and operating techniques, Mr. Power said, "The Independents furnished a healthy and vigorous spur to the initiative of the Bell system which might otherwise have languished in the security or inertia of a national monopoly. But the greatest contribution of the Independent telephone industry, as I see it, looking back over the critical days of World War I and through the early 1920's, is that it brought about a condition which eventually proved to be the very salvation of the industry from the fate which had overwhelmed the telephone business elsewhere around the world at that time. I refer to the dismal fate of public ownership and operation of telephone service, which today is the rule rather than the exception

Pat. Pend.

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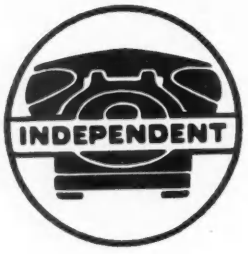

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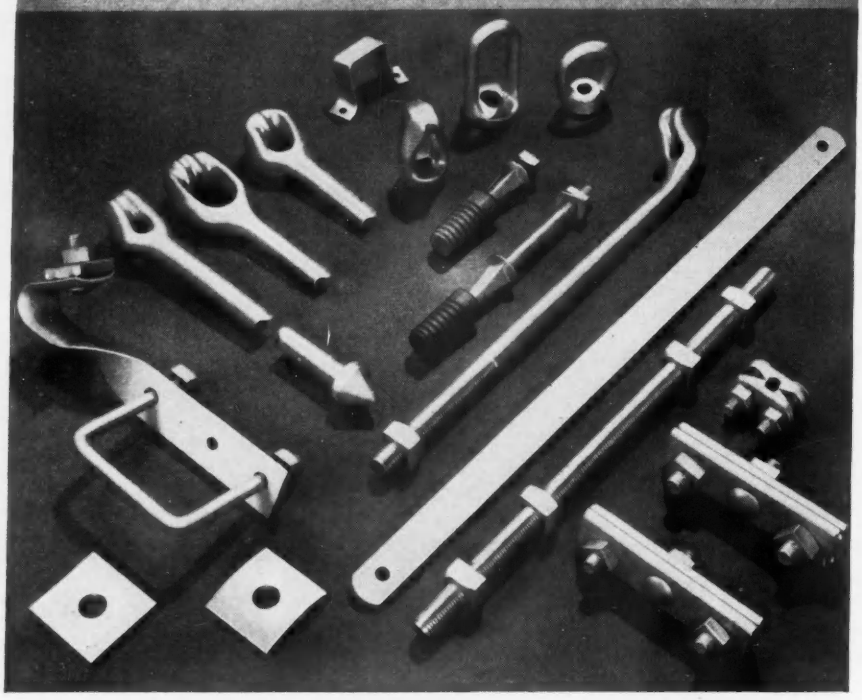

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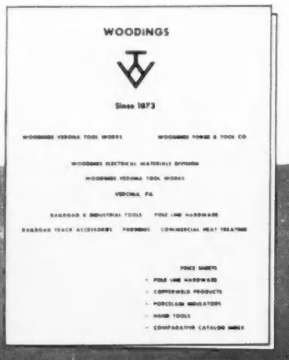

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outside of our own country.

"If that seems to be claiming too much credit for the Independents, let us just consider the facts surrounding the telephone industry's position, as a whole, on the 21st birthday of your National Independent organization. At that time the Independents were meeting in Chicago on December 8 to 10, 1915, for the final reorganization of an association which had already experienced a number of changes of name and several internal divisions. This was the convention which was to give us the United States Independent Telephone Association—the name by which it is known today and which dissolved the two rival organizations of the National Independent Telephone Association and the Independent Telephone Association of America. There was plenty of lightning and thunder at that meeting of 1915 — plenty of room for trouble.

"At that time there was dissatisfaction among the Independents over the way the Kingsbury commitment was working out. At that time Woodrow Wilson had been elected President after a campaign promising to put an end to trusts and monopolies. The Bell organization was already under the gun of the Justice Department. At that time there was much sentiment in Washington for following the pattern adopted by Great Britain in 1912, which terminated the bickering and rivalry between Bell and Edison Telephone interests in that country, by placing the entire service under the government post office monopoly.

"President Wilson's Postmaster General Burleson, in his annual report for 1913 had advocated government ownership. Prominent members of the House and Senate Committees, before whom Burleson's recommendations were considered, had announced their approval. And, as it turned out, four years later Congress did actually adopt a resolution, as a World War I emergency, turning control of the nation's telephone, telegraph, and other wire communication services to Postmaster General Burleson.

"But already the seeds of good business judgment, on the part of both the Bell and Independent industry leaders were bringing forth good fruit in the form of a co-operative arrangement destined to keep the

telephone business within the realm of private enterprise. So it was, that as the war clouds finally passed away in 1919, Congress decided that the communications lines should be turned back to the private companies.

"Now, let us think hard about that time back there in 1915. If at that point your national association had yielded to emotion or stubborness (which would have been very understandable), the Bell system could never have been able to persuade the federal government to remove its operations from the disciplines of the anti-trust laws and turn them over to the regulatory control of the Interstate Commerce Commission. With the help of the Independents, that reform was accomplished.

Mr. Power pointed out that today, the work of the United States Independent Telephone Association lies more in the realm of problems which are common to the Industry, as a whole.

"What's more, these problems are no less difficult," he said, "even though they may not precipitate such a decisive crisis as that to which I have referred during the early years of the century."

"In little more than seven months during which I have been president of your national association, I have come to realize, in a personal way, the indispensable value of the USITA to the individual member companies. Naturally, I was already familiar with the way the association was operated and the work it was supposed to do. But there is a difference between viewing the scenery from the sun deck and then finding yourself on the bridge. I can tell you I learned something I had not realized before. I found that your association was highly effective and was well organized to represent your interests in a number of different ways and for a variety of purposes . . ."

Listing the five categories of USITA responsibilities — the legislative, the executive, the judicial and regulatory, the interindustrial and the industrial public relations, Mr. Power stated that for the present, "your USITA is 'busy on the telephone' patrolling all its five outposts of activity of the general nature which I have described."

"In my opinion" he said, "it is doing a job which is entitled to your support, your co-operation, and your

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approval. Furthermore, we have to think about the two-way obligation of this relationship. Independent companies must support the USITA if the latter is to represent them intelligently. Any laxity or default, at this point could result in throwing away very good chances which the the telephone industry now has to play as an increasingly important and prosperous part of the future era of communications in American life . . . "

Officers elected are: President, Ralph B. Scott, pres., South Penn Telephone Co., Waynesburg; Vice President, A. J. Sordoni, Jr., vice president, Commonwealth Telephone Co., Dallas; Vice President, W. C. Martin, manager, Peoples Telephone Corp., Butler; Treasurer, George B. Rudy, Jr., president, York Telephone & Telegraph Co., York; Exec. Vice President, Albert C. Herbert, Harrisburg; and Secretary, M. Ethel Cunningham, Harrisburg.

Directors are: W. M. Gottschall, Carbon Telephone Co., Lansford, G. B. Rudy, Jr., York Telephone & Telegraph Co., York, George A. Ruhl, Buffalo Valley Telephone Co., Lewisburg; Henry Y. Smith, Columbia Telephone Co., Columbia; A. J. Sordoni, Jr., Commonwealth Telephone Co., Dallas; J. K. Stoltzfus, Conestoga Telephone & Telegraph Co., Birdsboro; L. R. Thurston, United Telephone Co. of Pa., Harrisburg; B. V. Cobler Rural Telephone Co., Knox; W. C. Martin, Peoples Telephone Corp., Butler; Harold G. Payne, Murraysville Telephone Co., Export; K. B. Schotte, Kittanning Telephone Co., Kittanning; R. B. Scott, South Penn Telephone Co., Waynesburg; A. N. Seward, Meadville, and L. F. Shepherd, General Telephone Co. of Pa., Erie.

Canadian Telephone Industry Report 4.5 Million Phones

THE CANADIAN telephone industry made a record increase of nearly 350,000 telephones in 1956 to bring the total to 4.5 million at the end of the year, Stuart R. Muirhead of Regina, president of the Telephone Association of Canada, told delegates at the 28th annual meeting of the Association in Victoria, B. C.

"This compares with 292,000 in 1955 and is the largest figure ever achieved in a single year," said Mr. Muirhead, who is Deputy Minister and General Manager of the Saskatchewan Government Telephone System.

He noted that unfilled orders for service had been reduced from about 80,000 to about 45,000 during 1956.

"Long distance business grew at a rapid rate in 1956." said Mr. Muirhead. "The very long haul traffic has been doubling about every five years."

The association president reported "big progress on the coast-to-coast microwave relay system which will provide additional long distance circuits and carry television across Canada when completed in mid-1958.

"It is now actually in service from the east as far west as Regina, and work to extend it further west is now proceeding."

Mr. Muirhead said that the radar protection screen known as the Mid-Canada Line, which has been supervised by the Trans-Canada Telephone System was largely completed during 1956.

Harold Telephone Co. Completes Dial Cutover

HAROLD Telephone Co., Inc., Pikeville, Ky., recently completed its dial conversion project. The Floyd County, Ky., firm serves communities along Pike County, Ky., and Floyd County border.

Paul Gearheart, president and manager, made first call on system after cutover. Gearheart called his cousin, Linc Conn, at Fort Worth, Texas, and told him of the improved system.

Gearheart's grandmother, Mrs. Columbia Roberts, operated the exchange at Harold in Floyd County for 26 years. In 1953 she sold it to Gearheart and his wife, Elaine, who is secretary of the firm. Mrs. Roberts was 73 when she died in 1954.

The Gearhearts have added additional telephones and switched to the dial system at a cost of approximately $337,000.

The old exchange had about 140 subscribers. The new system has approximately 400. The company is equipped to handle about 1,000 subscribers within five years. Communities served by the exchange include Harold, Boldman, Hurricane Creek, Big Mud, Prater Creek, Betsy Layne, Tram and Ivel.

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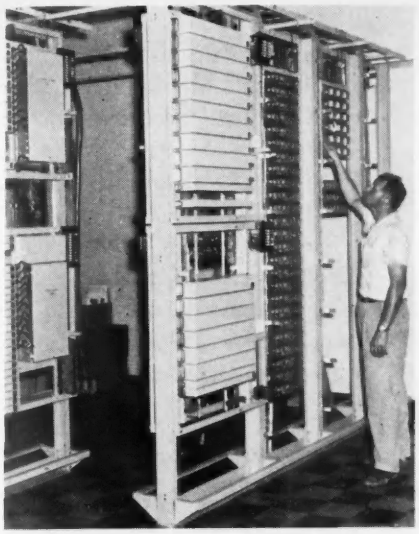
CT56-14



PAUL GEARHEART, president and manager of the Harold (Ky.) Telephone Co., Inc., inspects some of the new equipment installed when his firm converted from magneto to dial. New Equipment and the conversion cost about $337,000.

by four operators but now is completely dial. The exchange will employ one person, a maintenance man, other than the Gearhearts.

Another welcome change came with the cutover to the dial system. Calls from Harold to Pikeville in Pike County, a distance of about 10 miles and from Pikeville to Harold will be "local" instead of "long distance" as they have been in the past.

Mrs. Gearheart said such calls will be handled without a "long distance" charge by an arrangement with the Harold firm and the Pikeville office of the Southern Bell.

Diesel Engines

MODEL 60 and Model 80 Superior Stationary Diesels are shown and described in Bulletin #110 recently issued by White Diesel Engine Division, The White Motor Co.

The literature lists the engines as designed to provide low speed power for continuous, heavy-duty service. Engines are four-cycle, six or eight-cylinder, in-line models, ranging from 530 to 2000 BHP and from 300 to 1250 KW, are available either naturally aspirated or supercharged, and can be furnished to run as diesel, dual-fuel, or gas engines.

The 12-page, two-color bulletin includes product photographs, illustrated construction features, dimension data, performance curves, and specifications.—*Write Readers' Service Dept., 7720 N. Sheridan Rd., Chicago 26, Ill.*

Join the SWITCH from Toggle Bolts to MOLLY

Molly screw anchors are making toggle bolts obsolete. Company tests have proved Mollys seven ways better for attaching station apparatus and wiring to walls of hollow construction. So join the switch to Molly screw anchors and enjoy these advantages:

EASY TO INSTALL
NO SPECIAL TOOLS NEEDED
1. FIRST DRILL HOLE SAME SIZE AS MOLLY . THEN INSERT MOLLY
2. USE A SCREWDRIVER TO TURN SCREW
NOW MOLLY 3. IS FULLY INSTALLED
4. NEXT . REMOVE THE SCREW
5. NOW PLACE FIXTURE IN POSITION . RETURN SCREW AND TIGHTEN

1. Require smaller holes
2. Easier to install
3. Neater in appearance
4. Eliminate need for backboards with certain types of equipment
5. Self-aligning to permit use beside studs and on uneven wall backing
6. Permanent anchorage—attachment may be removed and replaced in same anchor
7. Apparatus does not have to be held while anchor is being installed

AND MOLLYS COST NO MORE . . in some sizes, less!

Ask Your Supplier . . Write for Free Literature

MOLLY CORPORATION • DEPT. 36 • READING, PA.

Advertisement

How Often Do You Service Your Automobile Spark Plugs?

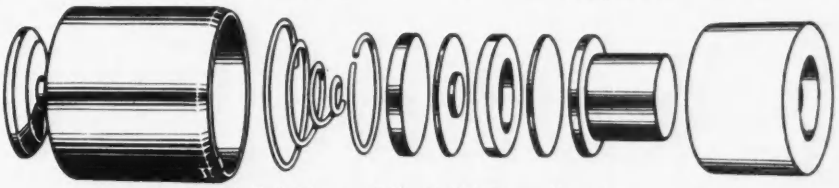
PERHAPS, after 10,000 miles of trouble-free service, perhaps 20,000 or maybe not at all.

In 10,000 miles of driving, however, each of your automobile spark plugs has fired more than 15,000,000 times in an atmosphere of vaporized hydrocarbons and at a temperature approximately 1800°F. During the explosion the cylinder head pressure is sustained at 150 pounds per square inch and the peak pressure at the instant of explosion is approximately 800 lbs. per square inch or equivalent to the impact of a steam driven pile driver. These conditions are obviously extreme. However, they do establish a standard or series of parameters from which to design a trouble-free lightning arrester.

By simulating the design features of the spark plug and adapting the materials employed to telephone arresters, Cook Electric Company engineers have created a new concept in lightning arrester design. The Mytigap lightning and surge arrester is the resultant product. This new arrester, in fact, also contains an additional advancement in the simple self-restoring feature which further reduces maintenance attention.

The new Mytigap arrester employs no carbon or organic material in its construction. Its discharge electrodes are an alloy of nickle, manganese and RU78. A similar material is used for the electrodes in automobile spark plugs and withstands the arcing and oxidation better than other known material.

For sample, literature and additional information see your distributor or telephone supply salesman.



Exploded View of Cook Mytigap Arrester.

construction and maintenance DIGEST

- Able cable
- 25-year battery
- Wire saves poles
- Non-slip action
- Slim conductors
- Block that bolt
- Profitable noise
- In the (sq.) groove
- Light and dry
- Anti-aging cable

Published regularly to help you get the most out of your materials and supplies dollar

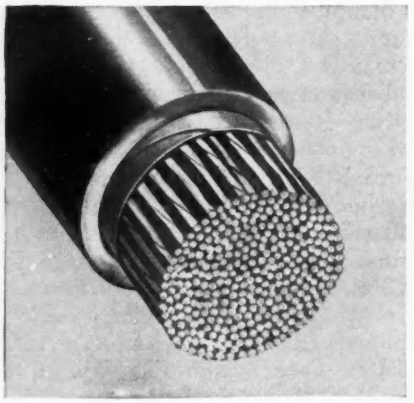
by Philip W. Blood, Office Mgr. and Inside Sales–Pacific Coast

In my 14 years with Stromberg-Carlson I've come to know the careful attention paid to supply orders like yours. When you order equipment from Stromberg-Carlson, **everybody** makes sure it's right. First, the manufacturer. He produces a long-lived product and his good name comes with it. And then Stromberg-Carlson–in delivering the product to you–gives you a guarantee backed by our 62-year reputation. So you get your money's worth for day-to-day operations–and you invest something in the future, because it's your supply business that plays a major part in helping us continue our research for new and better telephone equipment. It's business we certainly appreciate–thanks a million for your continued support!

Uniformity, Dependability, Lasting Service

When you've said that about cable you've covered about everything.

Kennecott Telephone Cable fills the bill in uniformity, dependability, lasting service for our telephone cable customers.



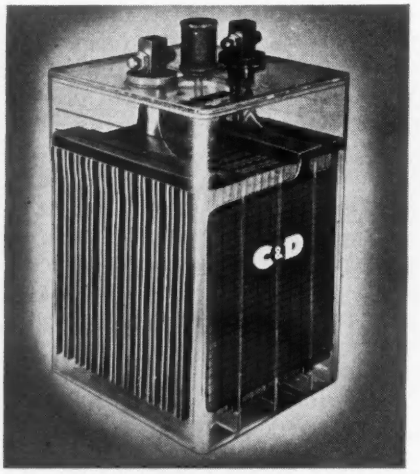
Before a single inch of Kennecott cable leaves the mill, it is tested for Dielectric Strength, Insulation Resistance, Conductor Resistance, Capacitance and Fixed Dimensions. Such care in manufacture is your warranty of efficient, trouble-free performance in the field.

Specify Kennecott – distributed by Stromberg-Carlson.

Battery will still have its pep when 1982 rolls around

It will last 25 years–in full float service! That's the life expectancy of C & D's PlastiCal (lead-calcium grids) telephone battery.

You get this extra-long, trouble-free operation because C & D Batteries, Inc. use an exclusive suspended and supported plate construction.



In full float service, this telephone battery stays on the job a quarter of a century.

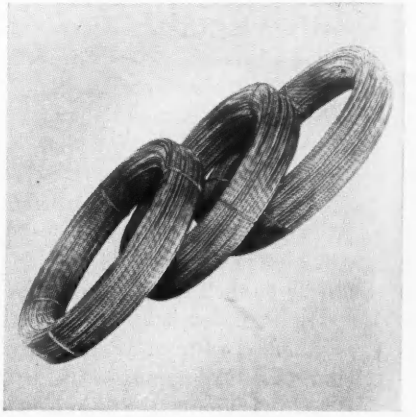
Illustrated here is a typical C & D telephone battery with a 660 A.H. capacity. When ordering this 25-year battery, specify PCE-660.

When you find that a 14-year expectancy meets your needs, you can get dependable operation from a C & D PlastiCell (high-tensile lead alloy grids) battery. For a PlastiCell with capacity of 660 A.H., specify CE-23.

You can order either of these C & D telephone batteries, plus other capacities, from your Stromberg-Carlson representative. Ask him about extra-long-life power supply with C & D Batteries.

Save 10-15 poles per mile

A net saving of 10 to 15 or more pole structures per mile is possible where **Crapo** High-Tensile Telephone Line Wire is used in long-span construction. Fewer pole structures mean substantial savings in time, labor and material, and in maintenance.



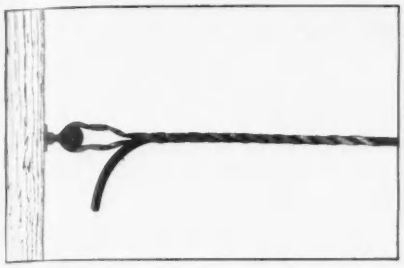
Crapo HTL-135 makes possible spans of 350 feet in heavy, 450 feet in medium, and 500 feet in light loading areas. Its practical economy should be considered for new extensions and where old lines are to be replaced.

Crapo HTL-85 (No. 12 B. W. G.) permits spans of 225 feet in heavy, 325 feet in medium, and 375 feet in light loading districts; provides stronger spans on existing pole structures. Both wires possess superior telephonic transmission qualities.

Low radial pressure assures positive grip

You get positive gripping action on 2 No. 14 and 2 No. 12 Copperweld and 2-.083 Steel C Rural conductors with Preformed C Rural Dead-Ends.

Low radial pressure over the entire holding area prevents slipping or damage to conductor insulation. The multiple wire loop provides extra strength.

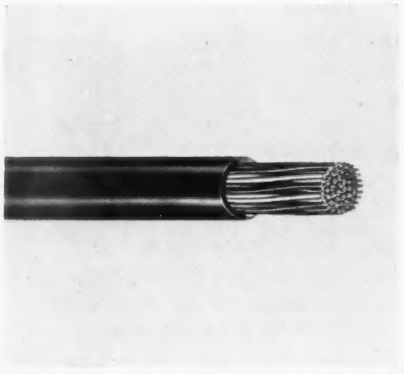


Neoprene coating over stainless steel prevents corrosion or abrasion.

PLP C Rural Dead-Ends are easy to apply by hand—no tools needed. You simply insert one leg through the eye-bolt, then wrap on the legs.

Low Cost . . . Easy To Install Type 1255 Inside Wiring Cable

To get economy plus ease of installation, specify Ansonia Inside Wiring Cable, Type 1255.



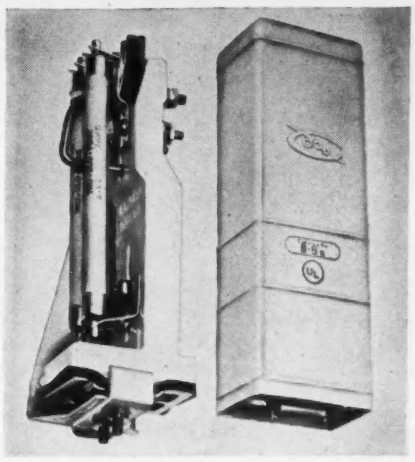
Economical and rugged Ansonia Type 1255 Cable. Supplied in 22 and 24 gauge vinyl-insulated fully color-coded brown (or ivory when specified) vinyl jacket with #29 rip wire.

Its small diameter conductors are insulated with 12 mils of color-coded plasticized polyvinyl chloride. Conductors are paired and cabled with a steel rip wire to facilitate stripping of the tough exterior plastic jacket.

This Ansonia Wire & Cable Company product is available in brown or ivory.

Protect telephones from lightning

No larger than a good-size candy bar is the Cook 09u telephone protector shown here. But it can save you a lot of grief and you can protect single circuits, both indoor and out.



Individual circuits are protected by small unit, measuring 6¼" x 2¼" x 1¾".

The body is a single piece of heavy white glazed porcelain. Lightning arrestors are two Tru-Gap dischargers, two flat carbons mounted on a copper ground strip, and A-9u 7-amp. lavite fuses. Neoprene gasket locks out insects, dust, snow, etc.

Noise can be money!

Take a business subscriber who has a telephone in some extremely noisy location—and who has finally decided to do something about it. Would you rather have him spend money in building a soundproofed booth—or give **you** the money as monthly income on a telephone which completely licks the noise problem?

The GAI-PHONE is such an instrument. It has a special transmitter that actually creates a "Zone of Quiet" around the handset—even in a spot as noisy as a boiler factory! It costs the subscriber **less** than a booth—and you get the revenue!

Use this insulator for rugged line construction

Hemingray Number 45 insulators with their square groove provide the ideal slot for your wire. Their reinforced construction under the groove reduces the possibility of breakage of the flange under the most severe ice loading conditions.

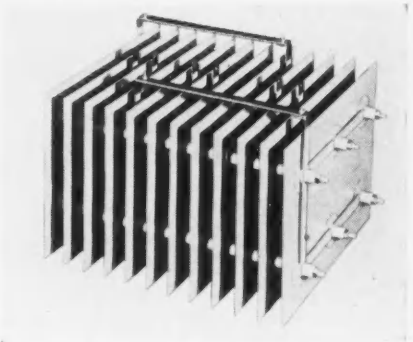
Double petticoat, square groove No. 45 insulator.

The extra long leakage path and double petticoat will reduce line losses and insure the strongest signal possible. These insulators are highly recommended for use on dial circuits where the strongest possible signal is necessary.

New, Dry CEMF Cells Eliminate Battery Maintenance

If you've been using liquid-filled counter EMF cells, you know what a problem they can be.

In a busy exchange these cells need frequent maintenance, and the job is apt to be unpleasant and time-consuming.



Lightweight dry CEMF cells bring freedom from maintenance

Now Lorain Products Corporation solves this problem with *new, dry* CEMF cells, which require no maintenance at all. In addition, they're light in weight, portable, safe, and completely flexible as to voltage and current ratings.

(*Continued on Page* 66)

(*Continued from Page* 65)

construction and maintenance digest

Freedom from maintenance means new economy, too.

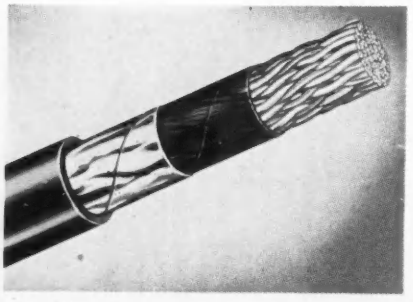
Cable has polyethylene sheath for extra-long life

In outside cable installations, you can side-step the ravages of weather, sunlight and temperature, saving yourself many dollars and hours in maintenance.

To do this, use the protection of the polyethylene sheath on Whitney Blake Telecable®. Telecable exchange area cable for aerial and duct use has polyethylene insulation **and** polyethylene sheath. No other thermoplastic material has given as good assurance of aerial cable sheath life expectancy as has polyethylene.

Specially treated to resist sunlight, the Telecable sheath has maximum chemical resistance, is not subject to environmental cracking.

Extremely light in weight, tough, yet flexible, it resists the stresses encountered during installation. You can expect top performance of Telecable for upwards of 20 or 25 years.



Telecable exchange area cable has outstanding weather resistance and transmission qualities.

Available in No. 24, No. 22 and No. 19 A.W.G. in sizes up to and including 404 pairs.

Distributed by

STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

Sales Offices: Atlanta 6, Chicago 6, Kansas City 8, Rochester 3, San Francisco

DURING the Trenton, Mo. Centennial, the display window of the Grand River Mutual Tel. Co., featured old telephones and antiques. Grand River employes, (l. to r.) are: NORMAN SAGER, combinationman; MRS. BARBARA TATE, secretary; MRS. ARLIE STAMPER, commercial clerk; and C. B. ADMIRE, combinationman, (his mutton-chop whiskers won the prize).

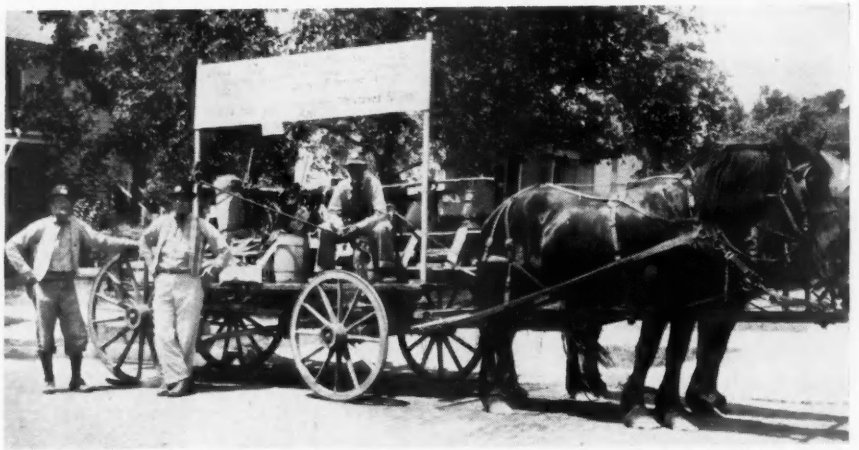
Grand River Mutual Tel. Participates In Trenton, Mo. Centennial Program

ALTHOUGH Grand River Mutual Telephone Corp. does not serve Trenton, Mo., it maintains a district business office at Trenton to serve six unattended dial offices which surround the town and the Grand River staff participates in all of the town's activities.

Last spring Trenton began preparations for its centennial celebration to be held in June. C. W. Chastain, general manager, of Grand River Mutual and L. B. Moore, Missouri commercial superintendent, assisted by several others, planned the company's participation in the affair.

A Centennial History of Trenton was to be issued. Grand River took an ad which contained pictures of Mrs. Moore using an old telephone and Mrs. Chastain using a modern instrument. Mrs. Moore was posed in an antique setting using a writing desk with built-in magneto telephone manufactured about 1897. Mrs. Chastain was using an Ericofon in a more modern setting. The comment in the ad was "Telephone styles have changed — Has the Conversation?"

At centennial time the business



PARADE FLOAT of Grand River Mutual Telephone Corp., featured this reproduction of an old line construction wagon. L to r. are: C. B. ADMIRE, NORMAN SAGER, and DeWAYNE WILEY.

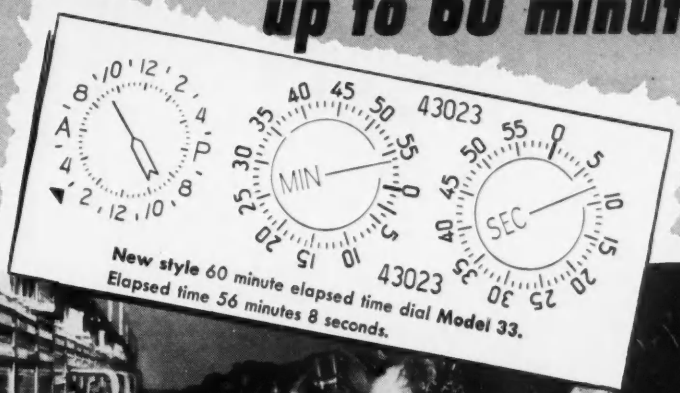
MRS. L. B. MOORE, (top) wife of the commercial superintendent of Grand River Mutual Tel. Co., Trenton, Mo., uses early-day writing desk telephone while MRS. C. W. CHASTAIN, (bottom) wife of the company's general manager, uses modern telephone.

houses of Trenton displayed antiques or contrasted old with new, while the people wore old fashioned clothing and the men grew beards (or bought a shaving permit). Grand River utilized its two display windows to contrast modern telephones with those of earlier periods. In the modern window colored instruments were displayed against a setting of modern living room furniture. The other window had old telephones (belonging to Mr. Chastain) with a background of antique chairs and lamps.

A parade was held with Grand River being awarded second place in the old-new division of its floats. A reproduction of an old line construction wagon led the way followed by a modern heavy construction truck. The wagon utilized the running gears of a wagon purchased by Mr. Moore's father in 1908 and the bed and frame and furnishings were

CALCULAGRAPH

Now Automatically gives you accurate Toll Call Records— up to 60 minutes



New style 60 minute elapsed time dial Model 33.
Elapsed time 56 minutes 8 seconds.

Photo Courtesy of General Telephone Co. of Michigan

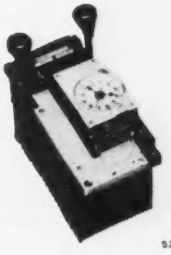
Now, Calculagraph, the modern dependable computer, automatically figures and prints toll calls up to 60 minutes —no need to add 30 minutes on long conversations.

Thus, Calculagraph adds one more feature to reduce human errors by busy operators and increases the volume of calls handled per operator. Assures you of all revenue due on every call.

For accurate toll call records, for automatic computation of elapsed time, for more efficient operation, install the new 60-minute elapsed time Calculagraph on your switchboard.

Information on this new Calculagraph is yours upon request.

Write today for illustrated brochure to Dept. TM



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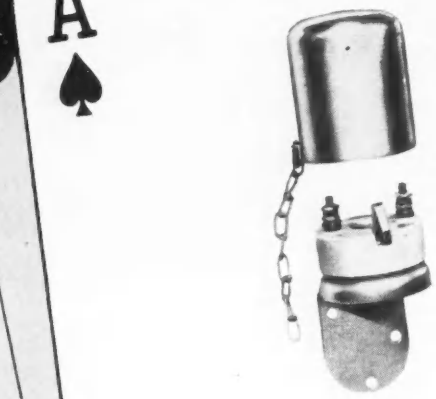
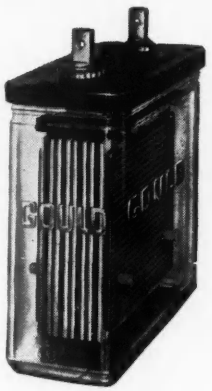
CALCULAGRAPH Company
HARRISON, N. J.

DEPENDABLE ELAPSED TIME COMPUTERS SINCE 1892

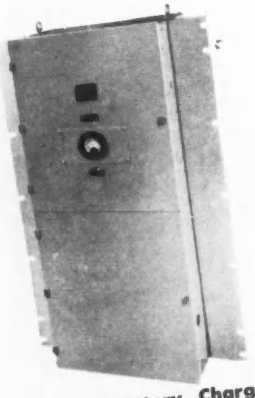


Developed for Better Insulation, the Cook Testerm Drop Wire Connector improves connecting and testing methods, occupies less space and provides terminating facilities for drop wire. Made by COOK ELECTRIC COMPANY.

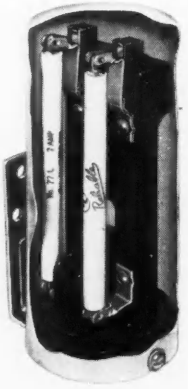


Outstanding Battery Performance is yours when you choose Gould Plante' Batteries. Thick, grooved, pure lead positive plates give many years of trouble-free service! Made by GOULD-NATIONAL BATTERIES, INC., the finest money can buy.

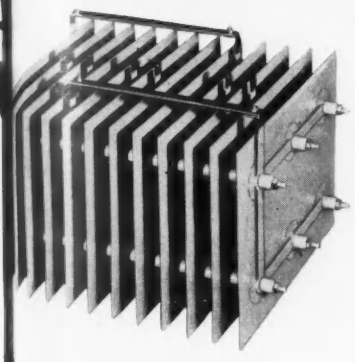
HERE ARE 8 "SURE



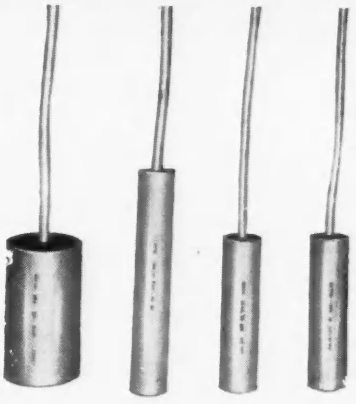
New 48-Volt Battery Charger Line. Completely redesigned Raytheon Rectifier Chargers (R) feature no load to full load regulation of ±1%, no tubes, automatic compensation for rectifier aging, no audible hum. Most compact units on the market—single and three phase, output from 30 to 400 amperes. RAYTHEON MANUFACTURING COMPANY.



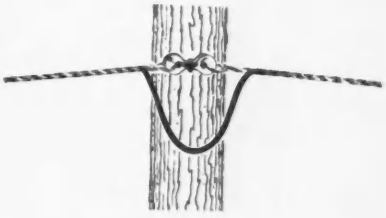
Really New! Reliable Series 2000 Station Protector. Phenolic fuse mount, flexible neoprene base with integral wire entrance sealing slots, redesigned fuse mount, and terminal post. All metal parts are bronze, aluminum, or stainless steel. Made by RELIABLE ELECTRIC COMPANY.



rain Dry CEMF Cells—Lorain's impor- nt new product for eliminating telephone fice maintenance associated with liquid led cells. Light in weight, portable, safe, mpletely flexible as to voltage and cur- nt ratings.
LORAIN PRODUCTS CORPORATION.

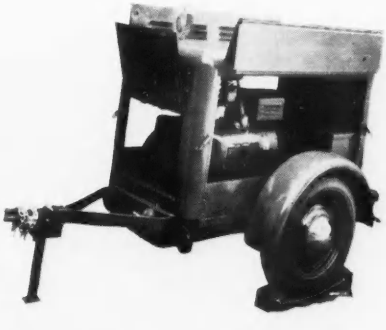


Application of Loading Coils on telephone circuits reduces unit loss to ⅓ or ¼ the nonloaded value—coils are designed for use on 2-wire telephone circuits in nonquadded paper insulated or plastic cable. COMMUNICATION EQUIPMENT & ENGINEERING CO.



Preformed Dead-Ends for Self-supporting Plastic Cable. Both long and short dead-ends available. Easily applied without the use of special tools. Merely slip one leg through a standard hardware thimble clevis and wrap the legs around the cable. PREFORMED LINE PRODUCTS COMPANY.

TRICKS" FOR YOU



Maintenance Generator—Equipment includes toolbox, fuel tank, safety chain and chocks, taillight and reflectors, and sheet-metal house with hinged sides, hinged front cover. Available with or without generator —92" long, 53" wide, 51" high. With generator, weighs 800 lbs. S & G MANUFACTURING CORPORATION.

Kellogg warehouses are well stocked and ready to give the prompt service you need. And because of Kellogg's 59 years of experience in the field, you are assured of getting the finest line supplies available.

KELLOGG
A DIVISION OF I T & T

KELLOGG SWITCHBOARD AND SUPPLY COMPANY
A Division of International Telephone and Telegraph Corporation
Sales Offices: 6650 S. Cicero Ave., Chicago 38, Ill.
Telephone: POrtsmouth 7-6900

KELLOGG Branch Warehouses and Offices:

6000 W. 51st Street
Chicago 38, Illinois
REliance 5-5445

410 N. Syndicate Avenue
St. Paul 4, Minnesota
Nestor 5878

23 Broderick Road
Burlingame, California
OXford 7-5780

4501 Truman Road
Kansas City 1, Missouri
Humboldt 7085

1515 Turtle Creek Blvd.
Dallas 7, Texas
Riverside 7-5191

1555 West Fourth Street
Mansfield, Ohio
Mansfield 7-2816

1594 Southland Circle, N.W.
Atlanta, Georgia
Sycamore 4-2441

504 County Bank and Trust Bldg.
Passaic, New Jersey
PRescott 9-3610

BEST... FOR MOTELS

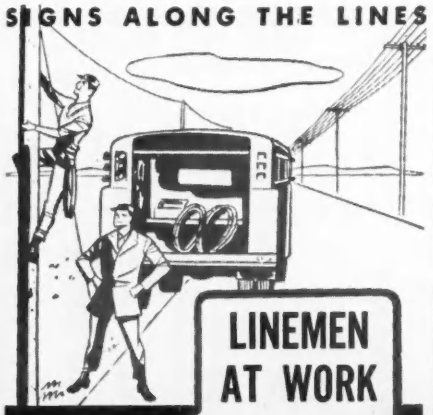
the BN Booth

attracts revenue with its colorful, clean appearance... retains profits with sturdy maintenance-free construction.

Consult your distributor or write direct for folder... Benner-Nawman, Inc., 3421 Hollis Street, Oakland 8, California.

a B-N booth is a busy booth!

SIGNS ALONG THE LINES



LINEMEN AT WORK

USING Crapo GALVANIZED GUY & MESSENGER STRAND

Positive strength and durability economies, combined with the superior qualities of steel, make Crapo Galvanized Steel Strand a rugged performer. The heavy, ductile, tightly-adherent galvanized coating — applied by the famous Crapo Process — provides dependable protection for the steel, prolongs the expectant life of the strand. There is a size and grade of Crapo Galvanized Strand for every practical need.

INDIANA STEEL & WIRE COMPANY, INC. Muncie, Indiana

largely the brain child of C. B. Admire as he recalled pictures of old timers at work. It carried, on the frame made of saplings, a lantern, coils of rope, wire and other paraphernalia. In the wagon were old poles, keg of nails, wood brackets, water jug, bed roll, etc. Toward the close of the celebration the wagon was asked to participate in another parade of the more popular floats.

All members of the Grand River personnel took part in the Centennial observance. The company, for a modest cost, received favorable publicity from this series of ideas for activities which, like Topsy, seemed to "just grow."

Carolina Company Converts Washington Exchange To Dial

IN A UNIQUE CEREMONY, the first local dial call was televised for all to see when Carolina Telephone & Telegraph Co. recently converted its last large exchange to dial.

Conversion of the company's Washington exchange to dial on July 21 leaves less then one per cent of the company's approximately 150,000 telephones manually operated.

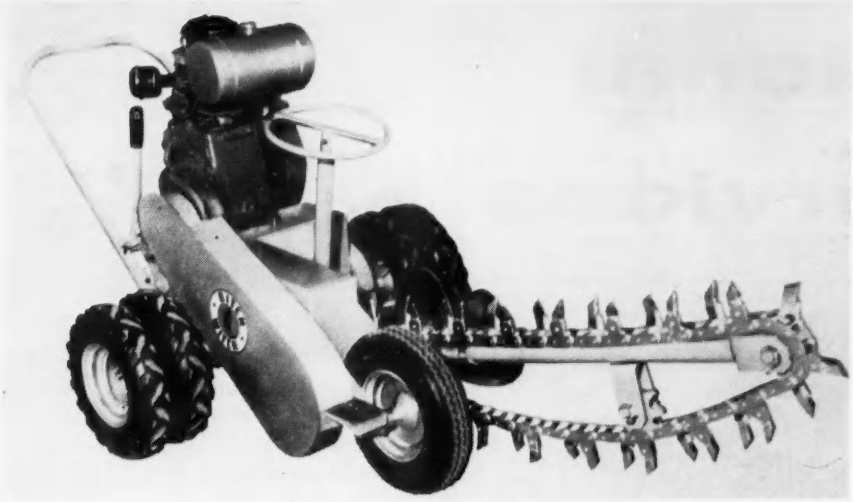
Featured in the ceremony were H. Dail Holderness, president of the company, who dedicated the new system to the service of the Washington area, and Washington's Mayor Tom Stewart. After brief and complimentary comments about the telephone company, Mayor Stewart dialed the first call to Mayor Ed Mann of the Washington Park community which lies adjacent to the city of Washington proper. In receiving the first call, Mayor Mann was accompanied by local telephone manager, A. L. Champion.

ED MANN, mayor of Washington Park, an outlying community of Washington (N. C.), is shown receiving the first local dial call as the Washington exchange is converted from manual to dial on July 21. Accompanying Mr. Mann in the television studio of station WITN is A. L. CHAMPION, local manager for Carolina Telephone & Telegraph Co.

Through special arrangements, the television screen was split so that the television audience could see both mayors as they talked to each other. Both commended the company highly for establishing dial service and also commended the Washington employes of the company for the excellent service they had provided in past years when the system was operated on a manual basis.

The expansion and improvement program for Washington has resulted in construction of a new exchange building, construction of new outside plant facilities, installation of new local dial equipment and the installation of SATT equipment which will ultimately provide direct distance dialing for Washington subscribers. This will be the first DDD exchange in North Carolina.

H. DAIL HOLDERNESS (left), president of Carolina Telephone & Telegraph Co., is shown seated with Mayor TOM STEWART, Washington, N. C., just prior to televising the first dial call to be made over the city's new dial system.



New service line trencher.

A TE&M Service Department

NEW PRODUCTS

HERE is the latest information on: — (1) A new trencher which is completely mobile with three forward digging speeds and reverse; (2) a new "Spur-Stay Pad," designed to eliminate kick-back and twisting problems; (3) a new low cost, automatic aerial ladder assembly; (4) a new, miniature resistance soldering tool; (5) a new, two-legged derrick; and (6) a complete gaff-shaping kit.

Trencher

A NEW "Ditch-Witch" service line trencher has been announced by The Charles Machine Works Inc.

The new Model "Ditch-Witch" trencher is completely mobile with three forward digging speeds and reverse plus road speeds up to 5 M.P.H. In usual digging conditions the Model M will trench at speeds of 1½ to 6 F.P.M. It is also equipped with a trailer hitch for towing at speeds up to 25 M.P.H.

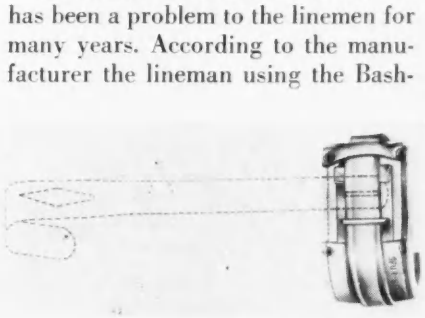
Trenching widths and depths available on the machine are: 3″ wide up to 48″ deep, 4″ wide up to 36″ deep and 6″ wide up to 30″ deep. The digging chains are quickly interchangeable on the job.

When digging, all spoils are deposited on one side of the trench, leaving the other side clear for access to the trench. The Model M may also be used for undercutting sidewalks and other obstructions by trenching in reverse gear.

The Model M is powered by an 8 HP air cooled engine and equipped throughout with sealed ball bearings, the Model M weighs 500 pounds. — For complete data, *Check New Product* 186.

"Spur-Stay Pad"

KICK BACK on linemen's climbers has been a problem to the linemen for many years. According to the manufacturer the lineman using the Bashlin #105 Spur-Stay Pad can adjust the pad and choose the most comfortable position for the climber to rest. The manufacturer claims the #105 Pad eliminates the majority of the kick-back and twisting problems. For complete data, *Check New Product* 187.



Bashlin "Spur-Stay" Pad.

Aerial Ladder

A HANDY, low cost, automatic aerial ladder assembly that will support 1,000 lbs. 34 feet in the air without additional rigging has been introduced by the Gordon Metal Products.

The Gordon Aerial Ladder is held firm by two support legs which are mounted to the front brackets. This, in addition to the 9-ft. assembly unit, gives the Gordon Ladder its unusual strength. In a metered Dynamical test, it was proved safe to 1,000 lbs. fully extended.

New aerial ladder.

Heavy torsion springs take the weight off the assembly when it is swung into position, making it easy and quick to handle. The ladder itself can be completely removed from the assembly for away-from-the-truck use. — For complete data, *Check New Product* 188.

Soldering Tool

HIGH efficiency cooling fins in combination with molded high impact plastic handle and cork grip allow the use of this new miniature resistance soldering tool on relatively high heat, continuous duty applications.

This addition to the Wassco line of soldering handpieces is single tip type and is available in two carbon tip sizes — the 10572 with 1/8″ tip and the 10573 with 3/16″ tip. Light

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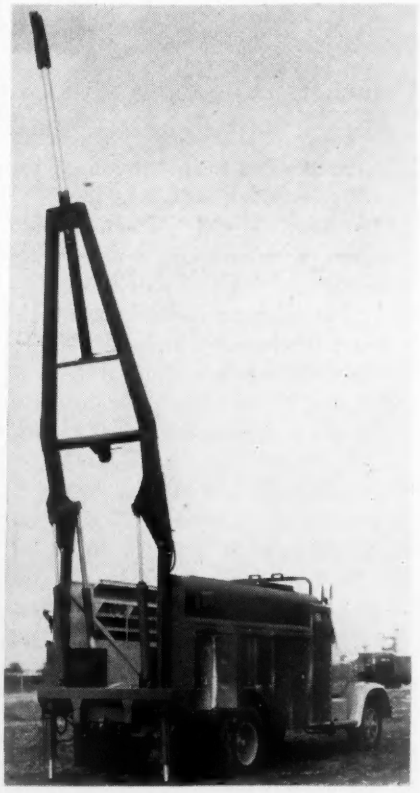
in weight (2 oz.) and nicely balanced. Slim cool shank and tip reaches into complex cable grouping without burning wire insulation.

Equipped with five-foot #10 extra flexible lead. Designed for use with Wassco 105-B2 500 watt power unit. — For complete information, *Check New Product* 189.

New Derrick

J. H. HOLAN CORP., has added another derrick to its comprehensive line — this one a two-legged unit with an extendable boom head — a double-acting cylinder which extends the derrick head an extra five feet. This allows for handling longer poles than conventional derricks of the same size. However, what distinguishes this particular derrick —



TWO-LEGGED derrick with extendible boom head is newest in J. H. Holan Corporation's line of derricks. Head, shown extended the full five feet, permits handling of longer poles.

called the Holan Series 6800 Power Derrick — are these features: (1) its ability to lift heavy loads in low ranges, (2) body-loading up to 4,000 pounds and (3) an operating range that permits the use of power feed attachments to force diggers into the ground. With the boom head extended, the 6800 handles poles up to 75 feet long — yet it loses little of its lifting capacity. For instance, in a position about 10 degrees off the vertical, capacity without stringer extended is 8,000 pounds; with stringer extended, capacity is 6,000 pounds.

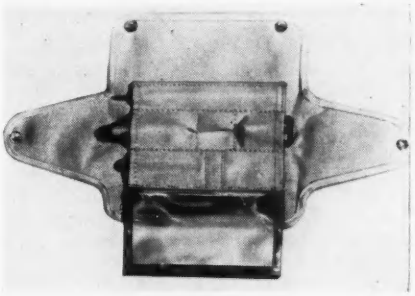
Handling heavy loads in low ranges is possible because of a unique 4-cylinder arrangement for moving the side legs. Two single-acting cylinders (auxiliary lift cylinders) move the derrick to within 10 degrees of vertical. Then, two double-acting cylinders (main lift cylinders) take over, giving greater leverage where it is needed.

Both sets of lift cylinders and the stringer cylinder are guided by the three hydraulic control levers. These levers can be located where desired — on the rear or in a side compartment. All piston rods are chrome-plated.

Like all Holan derricks, this one is completely hydraulic. It rises from overhead storage position and swings over to within five and a half feet of the ground. This not only allows for easy threading of the winch cable, but permits use of a digger power feed attachment. Thus, the hydraulic power and weight of the derrick can be employed for forcing a digger into hard ground.

The Series 6800 has the fabricated, rectangular side legs introduced in the Holan line last year.

For complete information, *Check New Product* 190.



Gaff Shaping Kit

BASHLIN'S No. 27 Gaff Shaping Kit has been designed to eliminate the problem of correctly shaping and maintaining the linemen's gaffs.

The kit contains all the correct tools and illustrated instructions. A lineman following the simple step by step procedures, illustrated and explained in the instructions, will maintain a properly shaped gaff for safe climbing and long gaff life.

The kit contains a file and handle, gaff support, rod, gauge, finishing stone and instructions in a compact folding case measuring 10″ by 4″ x 1½″. For complete data, *Check New Product* 191.

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MANAGER: For rapidly expanding 6 dial exchange rural Telephone System located in Southwest, Virginia. Must have administrative ability to achieve and maintain efficient operations and develop sound expansion programs. Ability to hire, train and direct personnel in all phases of telephone operations. Technical, plant, traffic and commercial knowledge of experience required. Permanent position carrying substantial opportunity for qualified person. Inquiries should include general outline of experience, salary expected, and date of availability. Replies Confidential. Please Write: Rufus R. Collins, President, Scott County Telephone Cooperative, Inc. P. O. Box 696, Gate City, Virginia.

SALES REPRESENTATIVE to travel southern territory. Will handle well established product with limited competition. Must be able to talk to executives and engineers of both telephone and power companies and work with jobbers. Should have knowledge of up to date outside plant construction, also sales experience. Salary open. Include full resume of education and experience with reply to Box 9073 c/o Telephone Engineer and Management, 7720 N. Sheridan Road, Chicago 26, Illinois.

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RADIO ENGINEER. Position offers real opportunity and wide field of service. Applicants should have degree in Electrical Engineering, a State license as professional engineer, well-rounded background in theory and application of radio in field of telephony and working knowledge of F-C-C- radio rules and regulations. Complete resume of education and experience should be submitted to: United States Independent Telephone Association, 438 Pennsylvania Building, Washington 4, D. C.

WANTED—Young man qualified as applicant for manager of small R.E.A financed Telephone Co-Operative located in South Central Wisconsin. Applicant should have reasonable basic experience in Plant maintenance and qualified to assume management responsibility for system of approximately 500 stations. Send inquiries to Ray Gibbons, President LaValle Telephone Co-Operative, LaValle, Wisconsin.

SALESMAN wanted to travel midwest territory. Must be experienced. Should have good grounding in outside plant. Young company. Lots of opportunity for right man. Salary open. Include all particulars with reply to Box 9074, c/o Telephone Engineer and Management, 7720 N. Sheridan Road, Chicago 26, Ill.

CHIEF OPERATOR — Familiar with intertoll dial, capable of supervising entire traffic department, Southern state. Write Box 9076, c/o Telephone Engineer Publishing Corp., 7720 N. Sheridan Road, Chicago 26, Illinois.

PLANT ENGINEERS — For large Independent Telephone Company. Some experience necessary. In reply state age, educational and employment history. Address reply to Personnel Supervisor, Rochester Telephone Corporation, 10 Franklin Street, Rochester 4, New York.

WANTED: Man with two or more years experience in Traffic Department to develop as an assistant to Traffic Superintendent. Some technical knowledge of central office equipment desirable but not essential. Large telephone company in the southwest. Good wages and working conditions with employe benefits. For interview write, Box 9069, c/o Telephone Engineer Publishing Corporation, 7720 North Sheridan Rd., Chicago, Illinois.

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FOR SALE: North Electric Company CX100. Good Condition. 100 lines, 15 links, 5 paystation adapters, 10-2 way dual function E and M signalling trunks, complete with battery rack, power board, charger, MDF and miscellaneous equipment. Reasonable price. Contact: T. J. Schuler, Gen. Tel. Co. of Pa., 20 E. 10 St., Erie, Pa.

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Stromberg-Carlson Names Morris to Research Post

APPOINTMENT of Frank A. Morris as director of the newly-established Stromberg-Carlson Telecommunication Research Department has been announced by John H. Voss, vice president and general manager of the Telecommunication Division. Stromberg-Carlson is a division of General Dynamics Corp.

In his new position Morris will be directly concerned with the coordination of research with practical application and development of products in the field of telecommunications.

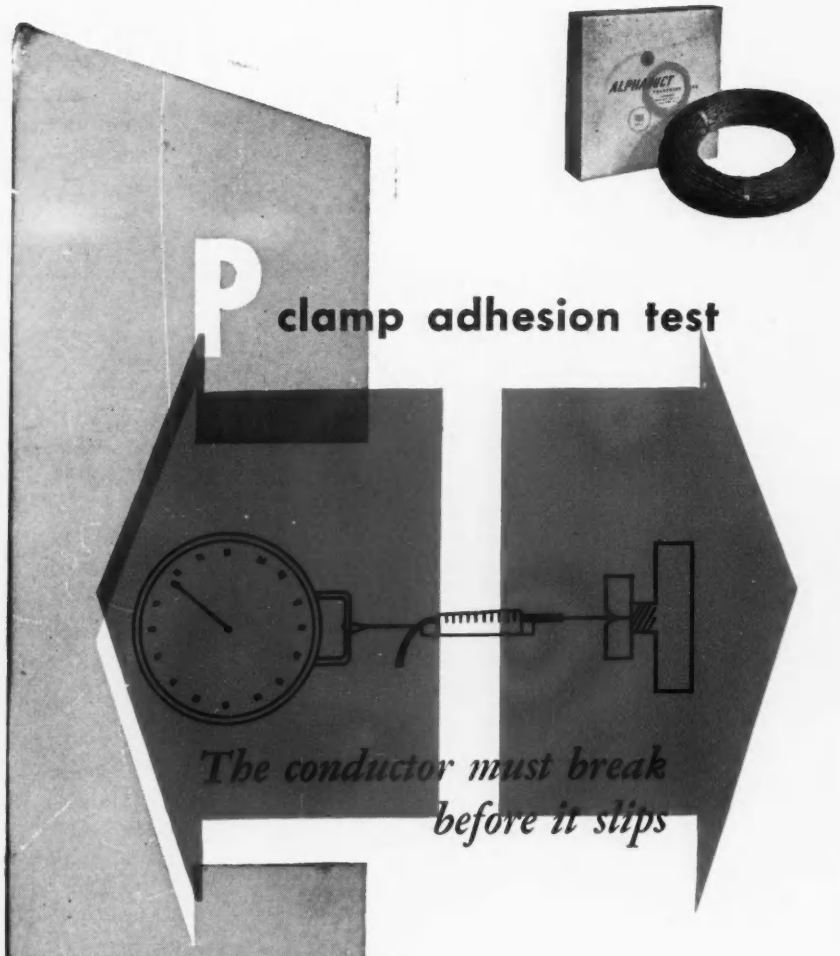
As project engineer, Morris was a pioneer in the development of one of the world's first complete electronic switching systems at Stromberg-Carlson. Since 1945 he has directed research in wire communication, including Toll Ticketing, which is the automatic recording and computation of toll call billing information. This involved data processing, and the development of code recognizing devices designed for the telephone industry, but suitable for many other application as well.

FRANK A. MORRIS

Morris, who has been with Stromberg-Carlson since 1943, holds 16 patents in the field of telephony. These include portions of the XY dial step-by-step system, PBX trunk hunting, party identification, and multidigit code detecting systems.

WILLIAM L. McGUIRE has been elected vice president and general commercial manager, and named to the board of directors of Automatic Electric Co. Mr. McGuire was formerly the company's general counsel.

ALPHADUCT



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A sample of Alphaduct wire is inserted in a P clamp with 12 inches of the wire projecting from the top of the clamp. The bail of the clamp is then inserted in the upper jaws of a tensile testing machine, and the end of the wire is stripped free of jacket and insulation and inserted in the other end of the machine.

The jaws of the machine are then gradually separated until the conductor breaks. The conductor must break before there is ANY slipping of either the jacket or the insulation.

Don't have any worries about a little old P clamp hurting ALPHADUCT drop wire. Try Alphaduct. It's dated by a color coded thread so you can see for yourself how long it lasts, how much money it saves.

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Victor G. Ritter Joins Reliable Electric Co.

RELIABLE ELECTRIC CO., Chicago, has announced the appointment of Victor G. Ritter as sales engineer. Ritter, holds a B. S. degree from Otterbein in Westerfield, Ohio. He

VICTOR G. RITTER

also has attended Columbia University and the University of Virginia.

In 1941, he entered the Signal Corps. During the period he spent in service, he served with the Alaskan Communication System and the Department of Communications in Korea. He was discharged from the Army with the rank of Captain.

Ritter had been associated with the Ohio Power Co. and the American Gas & Electric Service Co. prior to entering service and with the Ohio Consolidated Telephone Co. after returning to civilian life.

In 1953 Ritter was made general plant engineer of the Ohio Consolidated Telephone Company, the position he held prior to joining Reliable Electric Company.

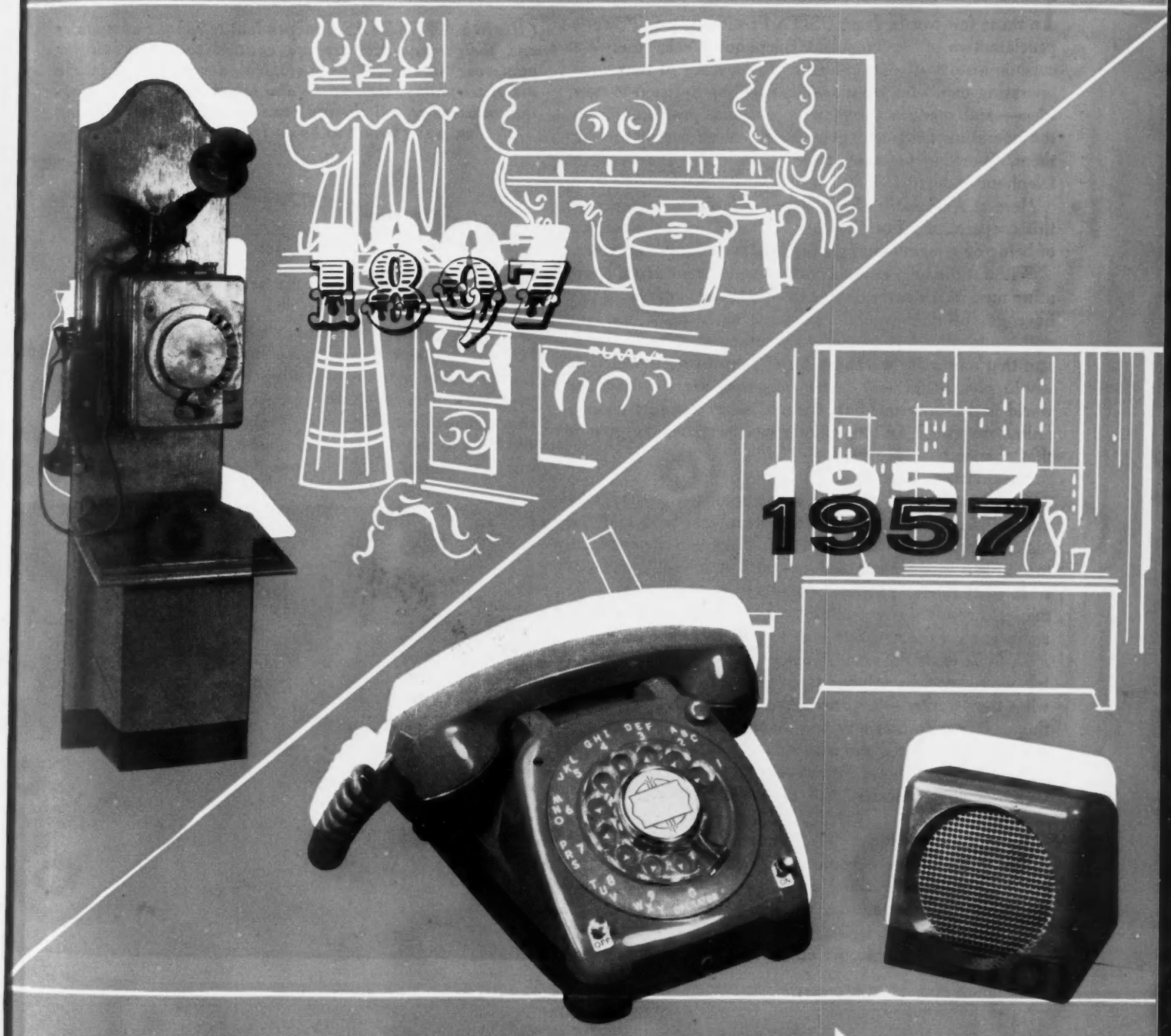
Ritter will be located at Portsmouth, Ohio, and will cover the territory of Kentucky, Tennessee and the southern part of Ohio and Indiana.

Gould Appoints Kelly General Sales Manager

THE APPOINTMENT of John P. Kelly as general sales manager of the Industrial Division of Gould-National Batteries, Inc. has been announced by M. W. Heinritz, vice-president. Mr. Kelly had previously served as Detroit regional manager and will now make his headquarters at Trenton, N. J.

AUTOMATIC ELECTRIC TOPICS

SEPTEMBER 195
VOLUME 22
NO. 3



Sixty Years of Independent Telephony. *(See next page.)*

"Independent Telephone Companies, Together With Their Manufacturers--"

In those few words, from USITA President D. C. Power's proclamation of "Independent Telephone Week," there's a capsule history of our industry. It's a story of telephone operating men who are more than willing to listen to new ideas—and manufacturers who welcome problems from the operating field, and give their best efforts to solving them. Working together, they've *made* the Independent telephone industry!

Here at Automatic Electric, we know the importance of this cooperation. For 65 years, we've enjoyed the feeling of being on a team—doing a big job, and doing it *together.*

Without the help and encouragement we got from operating men in the early days, Strowger Automatic wouldn't have got off the ground. In those early days, we had nothing to offer but an idea—an automatic telephone system that *worked!* We had a lot of faith in it; we *knew* it would give better and faster telephone service than the world had ever seen. But it would never have its chance unless we could find telephone men who would give it that chance to prove itself.

Fortunately, we *did.*

We found men who were ready to listen to the facts about the Strowger Automatic system, and who had the vision to recognize its possibilities. They had the courage, too, to act on their convictions—and as a result, installations of the new "girl-less" telephone system began to be made. From this beginning came success — world-wide acceptance of the new Strowger system in just a few years.

In those early days, too, we started to work closely with telephone men in solving their problems. They told us what they wanted—Automatic's engineers provided it for them. It was in this way that Automatic Electric and its customers pioneered the many developments that in later years made telephone history—the dial telephone, selective ringing, subscriber toll dialing, and automatic toll ticketing.

Thus, the teamwork of Automatic Electric and the operating men has become a feature of our operation; we've never accomplished anything important without it. Just lately, for example, we introduced our Type 80 Telephone—and in well-earned recognition of the telephone companies' role, we called it "The Telephone *You* Designed." We could say the same in greater or less degree about everything we do!

***(Right)** "WHEREAS, Independent telephone companies and their manufacturers are entitled to the credit for numerous significant technological developments in the art of telephony, such as the dial telephone, selective ringing, subscriber toll dialing, and automatic toll ticketing . . ." Yes, we're proud to be an Independent, too!*

Here at Automatic Electric, we appreciate the sentiment behind President Power's proclamation, teaming us with the operating man in providing better service for more people. It's an honor we hope we'll always earn. For on this Independent Telephone Week, we are inclined to tip our hats to the operating men who, by stimulating us to our best efforts, made it all possible.

A Proclamation

★ ★ ★

Independent Telephone Week

Whereas, Although Independent telephone companies were in existence in the United States several years prior to 1897, it was sixty years ago that these companies became organized and recognized as an industry and the United States Independent Telephone Association was given birth; and

Whereas, In the intervening years the Independent segment of the telephone industry has prospered and grown and today Independent companies serve 9,000,000 telephones and have an aggregate plant investment of $2,325,000,000, more than 100,000 employees and 200,000 stockholders; and

Whereas, There are 4,400 Independent companies which provide telephone service through 10,870 public telephone exchanges to people living in two-thirds of the geographical area of the United States and its territories; and

Whereas, Independent telephone companies and their manufacturers are entitled to the credit for numerous significant technological developments in the art of telephony, such as the dial telephone, selective ringing, subscriber toll dialing, and automatic toll ticketing; and

Whereas, Independent telephone companies together with their manufacturers and suppliers and related firms are a vital, vibrant part of the American free enterprise system and their importance to the economic and social welfare of the United States should be officially proclaimed; and

Whereas, It seems fitting that a suitable period should be designated and set aside for due observance of the sixtieth anniversary of Independent telephony in this country;

Now Therefore, In accordance with the powers vested in me as President of the United States Independent Telephone Association, I hereby issue this proclamation establishing the week of September 8, 1957, as INDEPENDENT TELEPHONE WEEK and request all Independent telephone companies and their manufacturers, suppliers and related firms and the public generally to pause in their appointed rounds in order to recognize and pay tribute to the loyal men and women who have made our industry great, to contemplate their achievements extending over sixty years of the country's history, to give thanks that a calling so essential to the public welfare is permitted to flourish in an atmosphere of freedom in a free nation, and to take such further action to commemorate our sixtieth anniversary as may seem fitting and proper.

Dated this 1st day of May, 1957, A. D.

Damon C. Power
President

ATTEST:
George C. Richer
Secretary

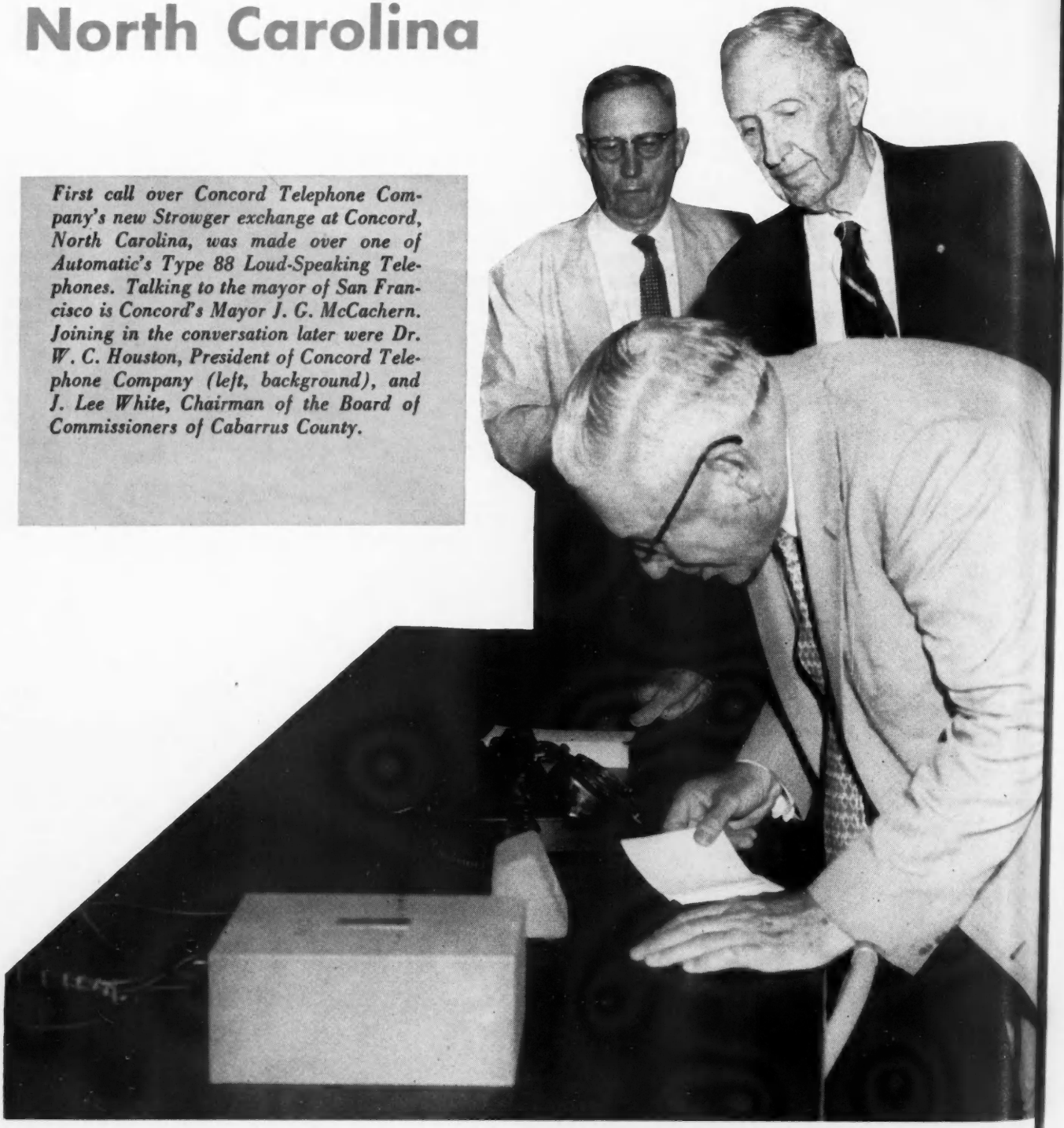
UNITED STATES INDEPENDENT TELEPHONE ASSOCIATION
CORPORATE SEAL
STATE OF ILLINOIS

(Left) *It was during the term of President William McKinley (foreground) that USITA was organized. An Automatic Electric pedestal-type dial telephone may be seen at left behind aide (seated). This photograph was taken in 1898—USITA's second year and the second year in office for President McKinley.*

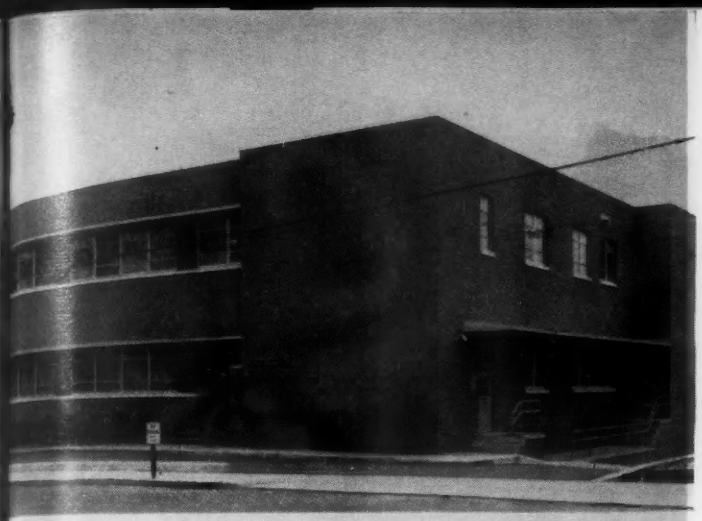
(Right) *"The Telephone You Designed"—AE's Type 80 features the "walking handset," lifelike transmission, "installer's hooklock," quick maintenance and easy dialing. These modern sets are in color, too.*

Coast-to-Coast Call

Cuts Over Strowger At Concord, North Carolina



First call over Concord Telephone Company's new Strowger exchange at Concord, North Carolina, was made over one of Automatic's Type 88 Loud-Speaking Telephones. Talking to the mayor of San Francisco is Concord's Mayor J. G. McCachern. Joining in the conversation later were Dr. W. C. Houston, President of Concord Telephone Company (left, background), and J. Lee White, Chairman of the Board of Commissioners of Cabarrus County.



A modern building, containing more than 34,000 square feet of space, was constructed at Concord for office, exchange and toll center. The structure is designed for expansion of present equipment, and the addition of a third floor, when required.

Nation-wide Operator Toll Dialing is handled through a 14-position Automatic Electric Type 31 Toll Board. The switchboard facilities can be tripled. Eventually all long distance operators in Concord Telephone's system will be located in the Concord toll center.

At Albemarle, North Carolina—converted to Strowger Automatic early this year—Mayor D. A. Moose (right) gets first-hand explanation of how step-by-step dial system works from (left to right) L. D. Coltrane, Jr., Secretary-Treasurer and General Manager, Concord Telephone Company; Dr. W. C. Houston, President of the Company, and David Braddock, Automatic Electric.

A common—yet always unique—high point in Strowger cutover ceremonies is that "first call." The Concord (North Carolina) Telephone Company went one better in this stage of its cutover activities. There Mayor J. G. McCachern placed the first call over an Automatic Electric Type 88 Loud-Speaking Telephone—all the way to Mayor George Christopher of San Francisco. And the Concord long distance operator simply dialed the California number from her position—one of 14—at the Type 31 toll board.

It certainly was cooperative of Concord's mayor to be on hand at 2:01 a.m. on June 16 to make the call. No less noteworthy was the "staying power" of Concord Telephone's president, Dr. W. C. Houston, and that of J. Lee White, Chairman of the Board of Commissioners of Cabarrus County. These men also took part in the "loud-speaking" conversation with San Francisco's mayor, who was in a somewhat more favorable time zone to receive the call.

Concord's cutover was to 3,840 lines and 10,000 terminals of Strowger Automatic equipment. The new exchange replaced Strowger equipment first installed in 1939. The original installation of 2,000 lines had been expanded over the years until in 1954 it consisted of 3,200 lines. Concord kept on growing, and the telephone company, seeking to provide the utmost in service, found that a new exchange and building would best serve the area. There's room for much more growth, too—enough to more than double present facilities, in fact.

Switchboard facilities could be tripled in size, and they may well be. Concord is slated to become toll center not only for presently served Concord, Harrisburg and Mt. Pleasant, but for Albemarle, Badin, New London and Oakboro as well. Next year, China Grove-Landis and Kannapolis will also be included. Thus, when the project is completed, all long distance operators for all exchanges in the Concord Telephone Company will be in the Concord toll center.

Being connected with the nation-wide toll network, the Concord toll center will permit operators to dial calls not only to San Francisco, but to any other point on the network. The only time required to reach the called number is the time required to dial the proper series of digits. Provision has been made for conversion to Direct Distance Dialing in the future.

The home office at Concord now serves about 11,000 telephones—including extensions—or a little more than one-third of all telephones in the Concord Company's system.

Earlier in Concord Telephone's program of modernization, exchanges at Albemarle, Badin, Oakboro and New London were converted to Strowger equipment. With the exception of Albemarle, these Stanly County exchanges are unattended. The network's subscribers have extended area service with each other.

In speaking of the first call, operator inter-toll dialing, and the new exchange, *The Concord Tribune* had this to say:

"With completion of the trans-continental call, Concord is now served by the most modern and efficient dial telephone equipment in the world."

Well put, editors!

CUTOVERS IN ANCIENT CITIES SERVE Atomic Missile Command

U.S. ARMY PHOTOGRAPH

The first call marks the successful cutover of another Automatic Electric exchange—this time, in Verona, Italy. Maj. A. O. Mascolo, Signal Section (left), and Maj. Gen. Harvey Fischer, Commanding General of SETAF, officially open the installation; Lt. Col. J. A. Roosa, Signal Officer, stands by. The 400-line exchange at SETAF's main headquarters is interconnected with the 300-line installation at its Vicenza headquarters.

In the Northeastern plains of Italy, where many armies have swept down the invasion route between the Adriatic Sea and the Alps, a United States Army atomic missile command now blocks this passage. And in Verona and in Vicenza, two ancient cities in this area, modern Automatic Electric equipment is providing communications of the very finest for the officers and personnel of this command.

The command is known as SETAF—Southern European Task Force. It consists of approximately 6,000 soldiers, specially trained in atomic warfare, and equipped with Honest John rockets and Corporal guided missiles.

Many complex and secret devices serve the command's control and communications functions. Newest installations include two by Automatic Electric SATAP, the Italian affiliate of Automatic Electric Company. At the task force's main headquarters in Verona a 400-line dial telephone system has been installed; a 300-line exchange serves the Vicenza headquarters. The two systems are inter-connected.

An atomic soldier of the 124th Signal Company put the final touches on switch adjustment, just as an installer in the United States would do. The Signal Officer of the command explained the operation of the step-by-step system to the commanding general, as an exchange manager might do for his company president. The almost traditional ribbon-cutting was part of the ceremonies, and, of course, a "first call" successfully opened the new exchange. Quite a different situation from those of telephone company cutovers, but the similarities were there, too!

New, Compact Recorder-Announcer

Provides Economical Intercept Service

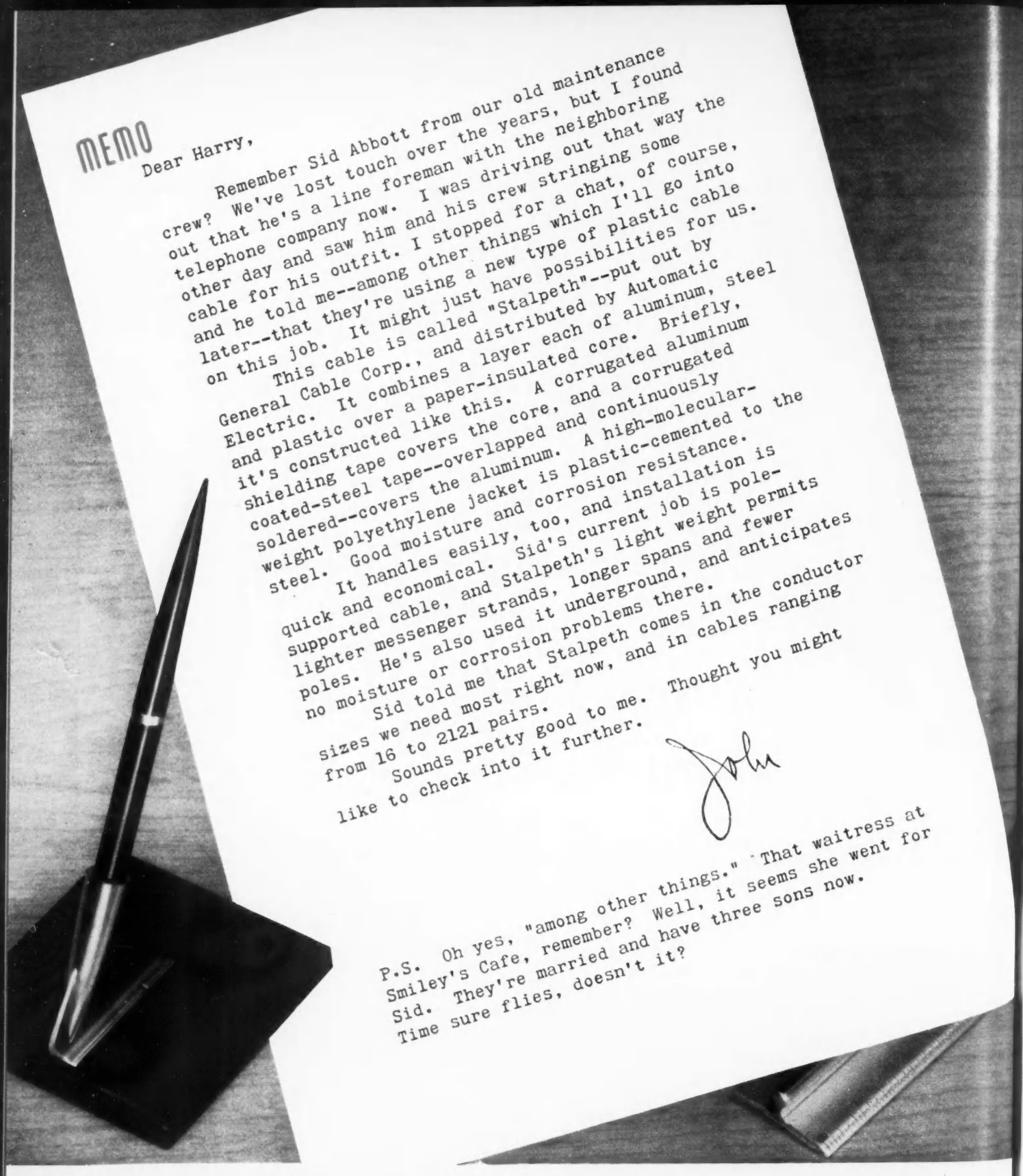
A familiar problem with telephone companies everywhere has been that of callers dialing disconnected lines, dead levels, etc. At one time it was necessary to have an operator on duty to intercept these calls and explain the error to each caller. We solved that problem for many companies when we developed the Automatic Recorder-Announcer, Type MCF, which automatically intercepts the call and gives a recorded message. This unit provides up to five different messages, to meet all intercepting needs.

The Type MCF unit works so well that we've had many requests for a smaller machine, providing just one message. So, a new type machine, the SCC (Single-Channel, Compact) Recorder-Announcer has been developed by Automatic Electric.

The SCC Recorder-Announcer has one channel of fixed length (12 seconds) to which 70 callers can listen at once. Working on the same principle as the larger machines, the Type SCC provides recorded announcements, thus relieving the operator for other duties.

To record or change the message on this compact machine, you simply speak the message you want into a standard telephone handset. From there on, each caller receives the information quickly, clearly, and at a minimum cost to you.

The Type SCC is so compact that you can install one in each exchange, and thus keep intercept calls off your trunks. For economical intercept service, you can't miss on the Type SCC Recorder-Announcer. Newest in our line, it's described in Circular 1845-A. Write, and we'll be glad to send you a copy.



MEMO

Dear Harry,

Remember Sid Abbott from our old maintenance crew? We've lost touch over the years, but I found out that he's a line foreman with the neighboring telephone company now. I was driving out that way the other day and saw him and his crew stringing some cable for his outfit. I stopped for a chat, of course, and he told me--among other things which I'll go into later--that they're using a new type of plastic cable on this job. It might just have possibilities for us.

This cable is called "Stalpeth"--put out by General Cable Corp., and distributed by Automatic Electric. It combines a layer each of aluminum, steel and plastic over a paper-insulated core. Briefly, it's constructed like this. A corrugated aluminum shielding tape covers the core, and a corrugated coated-steel tape--overlapped and continuously soldered--covers the aluminum. A high-molecular-weight polyethylene jacket is plastic-cemented to the steel. Good moisture and corrosion resistance. It handles easily, too, and installation is quick and economical. Sid's current job is pole-supported cable, and Stalpeth's light weight permits lighter messenger strands, longer spans and fewer poles. He's also used it underground, and anticipates no moisture or corrosion problems there.

Sid told me that Stalpeth comes in the conductor sizes we need most right now, and in cables ranging from 16 to 2121 pairs.

Sounds pretty good to me. Thought you might like to check into it further.

John

P.S. Oh yes, "among other things." That waitress at Smiley's Cafe, remember? Well, it seems she went for Sid. They're married and have three sons now. Time sure flies, doesn't it?

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Northlake, Illinois

John Sharkey, Editor

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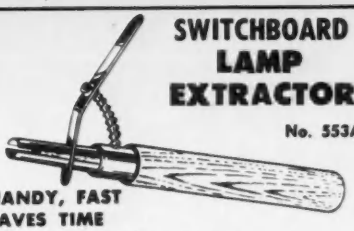

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THE BACK OF THE BOOK

By JOHN G. REYNOLDS

Logical Conclusion

INFORMATION operators become used to all types of questions. Some of them require considerable ingenuity to answer correctly. Recently, *Long Lines* magazine reported that in the heat of summer, a very youthful voice called up and asked the operator for the telephone number of the North Pole. It seemed that he wished to speak to Santa Claus.

"At this time of year?" asked the operator in surprise.

"Yes," replied the voice. "I just found one of his boots in dad's closet. I thought maybe he might need it before next Christmas."

Good Medicine

WE UNDERSTAND a Milwaukee telephone salesman, working on a new building addition for St. Mary's Hospital, recommended and sold not only permanent telephones in every patient's room but also 128 color sets.

Hospital authorities had no defense against his reasoning that the cheery note of color, in harmony with the room decor, would be a real help in speeding convalescing patients along the road to recovery.

Wrong Line

YOU'VE heard versions of this story before but according to the *Associated Press*, this one actually happened.

A public polio inoculation program in Oklahoma City saw thousands of persons queued up in assembly-line fashion for shots.

A man with his shirt sleeve rolled up and a wad of cotton over the injection spot wandered up to one of the medical assistants.

"All I was doing was looking for a telephone when I got pushed into a line and jabbed," he moaned.

"Leave It To A Boy"

OUR MICHIGAN correspondent tells us this all happened at a PTA meeting when five little first-graders marched out onto the stage to welcome everyone.

Each child carried a large cardboard letter to spell out the word "H-E-L-L-O." All took their correct positions except the boy who carried the letter "O." He had forgotten where to stand. He paused for a few moments at the rear of the stage, and brought down the house when he finally decided he belonged at the head of the group.

Washington Time-Saver

PROGRESS plunged a step forward last month at the U. S. Capitol thanks to the telephone company.

Now you can ring up your favorite statesman at a new, faster, smoother, easier-to-remember phone number — Capitol 4-3121.

A Chesapeake & Potomac Telephone Co., spokesman said the new number is a big time saver.

A bureaucrat known to be a fast man around the dial unofficially tested the new and old numbers with a stop watch.

The scientific results:

On an average speed dial: old number 8 secs.; new, 5 secs. Time saved — 3 sec.

On a fast dial; old number 5 sec.; new, 3 sec.; — time saved 2 sec.

Conclusion — the new number will save hundreds of dial-hours daily.

For example, an industrious lobbyist phoning all 435 members of the House to discuss a spot of legislation will save 21 minutes and 45 seconds in dialing time.

"This is just one of the things we do all the time in line with general progress," the phone company spokesman said.

However, he said despite all the advantages of the new number, the phone company realizes that people will take time learning it. Therefore, he said, the Capitol for the next six months can still be reached by dialing the old number.

Rx FOR REDUCING

YOU'VE GOT TO BUILD THIS UP — AND TAKE THAT OFF!
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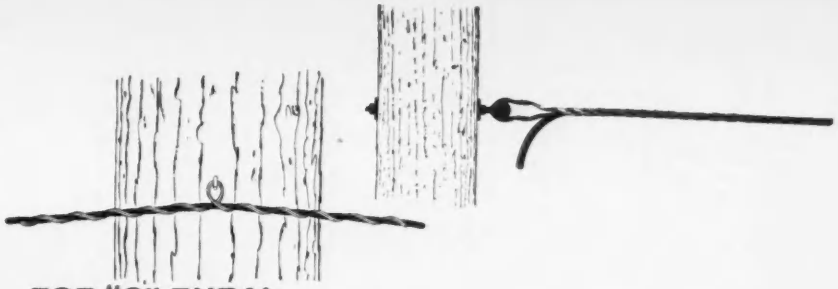

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for the Telephone Industry . . .

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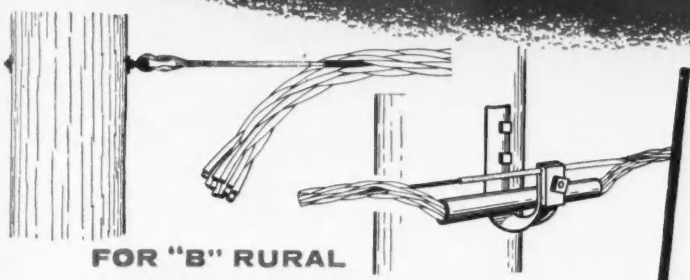

FOR "B" RURAL

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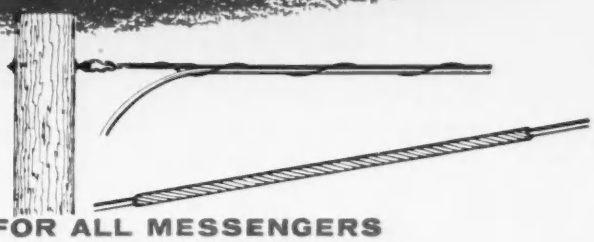
PREFORMED ARMOR RODS protect insulated messengers against clamping pressure or abrasion damage.



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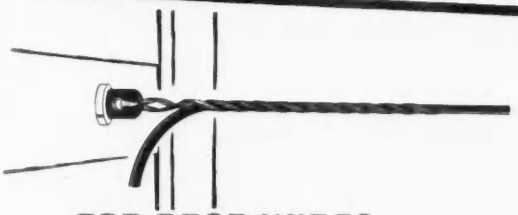
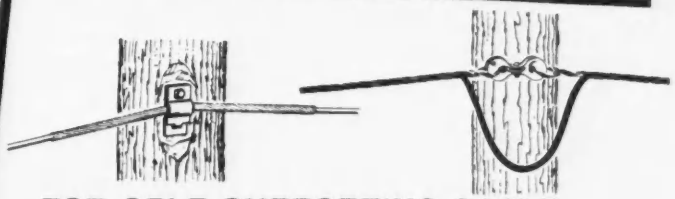


FOR DROP-WIRES

DROP-WIRE DEAD-ENDS of stainless steel . . . Neoprene coated . . . cushion the grip; eliminate abrading or cutting through insulation; provide low radial pressure over the entire holding area . . . no damaging concentrated pressures. No slippage or cold flow. Multiple-wire bail prevents fatigue failure.



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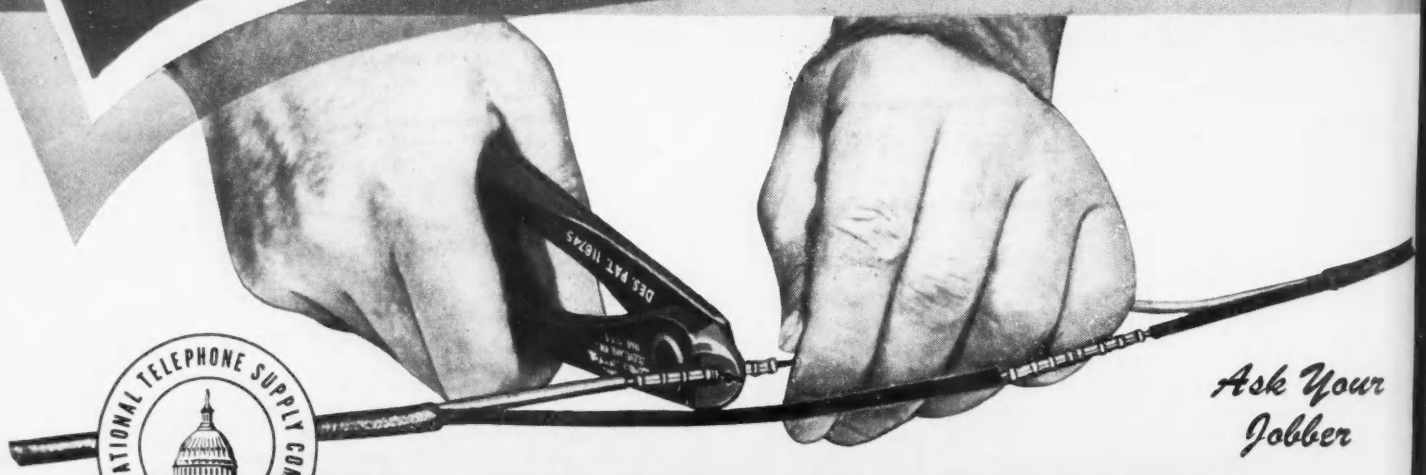

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